

Water Supplies Department New Works Branch Construction Division 11 Tai Yip Lane Kowloon Bay Kowloon Hong Kong

Attention: Mr Y M Chan

Your reference:

Our reference:

HKWSD201/50/107836

Date:

17 February 2022

BY POST

Dear Sirs

Quotation No.: WQ/17/A071 Independent Environmental Checker for Water Supplies Department – Proposed Desalination Plant in TKO Area 137 for Contract No. 13/WSD/16 Verification of Monthly EM&A Report No.41

We refer to emails of 9 and 16 February 2022 attaching Monthly EM&A Report No.41 for the captioned project prepared by the ET.

We have no further comment and hereby verify the captioned report in accordance with Clause 3.5 of the Environmental Permit no. EP-503/2015/A.

Should you have any queries regarding the above, please do not hesitate to contact the undersigned or our Mr Louis Kwan 2618 2831.

Yours faithfully ANEWR CONSULTING LIMITED

James Choi

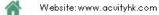
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# Contract No. 13/WSD/16

Mainlaying in Tseung Kwan O

# Monthly EM&A Report No. 41 (Period from 1 to 31 December 2021)

January 2022 (Rev. 0)

	Prepared by:	Certified by:
Name	Charlene Lai	Jacky Leung
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Signature		A/I
Date:	14/01/2022	14/01/2022



# **Revision History**

0	1 <sup>st</sup> Submission	14 January 2022
Rev.	DESCRIPTION OF MODIFICATION	DATE



# **CONTENT**

	Executive S	ummary	
1.	Basic Projec	t Information	9
2.	Noise Monit	oring	14
3.	Waste mana	ngement	18
4.	Landfill gas	monitoring	19
5.	•	f Monitoring Exceedance, Complaints, Notification of Summons	and 38
6.	EM&A Site I	nspection	39
7.	Future Key I	ssues	41
8.	Conclusion a	and Recommendations	43
Αŗ	pendix A	Construction Programme	

Appendix A	Construction Programme
Appendix B	Overview of Mainlaying in Tseung Kwan O
Appendix C	Summary of Implementation Status of Environmental Mitigation
Appendix D	Impact Monitoring Schedule of the Reporting Month
Appendix E	Noise Monitoring Equipment Calibration Certificate
Appendix F	Event/Action Plan for Noise Exceedance
Appendix G	Noise Monitoring Data
Appendix H	Waste Flow Table
Appendix I	Landfill Gas Monitoring Equipment Calibration Certificate
Appendix J	Landfill Gas Monitoring Data
Appendix K	Complaint Log and Regulatory Compliance Proforma
Appendix L	Site Inspection Proforma
Appendix M	Proactive Environmental Protection Proforma
Appendix N	Impact Monitoring Schedule of Next Reporting Month
Appendix O	Academic Calendar(s)



#### **EXECUTIVE SUMMARY**

#### <u>Introduction</u>

- A1. Penta-Ocean Concentric Joint Venture (POCJV) is contracted to carry out the Mainlaying in Tseung Kwan O under Contract No. 13/WSD/16 (hereinafter known as "the Project").
- A2. In accordance with the Environmental Monitoring and Audit (EM&A) Manual for the Project, EM&A works should be carried out by Environmental Team (ET), Acuity Sustainability Consulting Limited (ASCL), during the construction phase of the Project.
- A3. This is the 41<sup>th</sup> Monthly EM&A Report, prepared by ASCL, for the Project summarizing the monitoring results and audit findings of the EM&A programme at and around Tseung Kwan O (TKO) during the reporting period from 1 December 2021 to 31 December 2021.
- A4. The EM&A programme for this contract has covered environmental monitoring on construction noise level at selected NSRs and Contractor's environmental performance auditing in the aspects of construction dust, construction noise, water quality, waste management, Landscape and Visual and Ecology.

# **Summary of Main Works Undertaken & Key Mitigation Measures Implemented**

A5. Key works carried out in this reporting period for the Project included the followings:

Location	Location	Works Conducted in the reporting month
	TKO 137 Pit A	Preparation works of pipe installation inside sleeve pipe between Pit 137A to Pit 137C were conducted.
Portion H of the Project Site	TKO 137 Pit B	Preparation works of pipe installation inside sleeve pipe between Pit 137A to Pit 137C were conducted.
	TKO 137 Pit C	<ul> <li>Preparation works of pipe installation inside sleeve pipe between Pit 137A to Pit 137C were conducted.</li> </ul>
	Wan Po Rd – Workfront 1	<ul> <li>Mini piling works for ELS of receiving pit 1 construction were conducted.</li> </ul>
	Wan Po Rd – Workfront 2	Curtain grouting for mini piling works of jacking pit 2 was conducted.
Double of the	Wan Po Rd – Workfront 3	Pipe trench excavation and pipe laying were in-progress.
Portion J of the Project Site	Wan Po Rd – Workfront 4	Pipe trench excavation and pipe laying were in-progress.
	Wan Po Rd – Pit A	Remedial works for pit was conducted.
	Wan Po Rd – Pit B	Preparation works for TBM pipe jacking were conducted.
	Shek Kok Road – Pit D	Preparation works for MTBM pipe jacking were conducted.



Location	Location	Works Conducted in the reporting month
	Shek Kok Road – Hand-shield	Modification of existing retaining wall was conducted.
	Landfill Stage 1 – Area A	Pipe trench excavation and pipe laying were in-progress.
	Pet Garden's Road	Pipe trench excavation and pipe laying were in-progress.
	Pung Loi Road – Pit WPR1	Sheetpile driving works for pit ELS were conducted.
	Roundabout – Pit G1A	Pit excavation and ELS works were conducted.
	Velodrome – Pit K	Preparation works for pipe laying were conducted.
	Velodrome – Pit M	Pipe installation inside sleeve pipe between Pit M1 to Pit M2 was conducted.
	Velodrome – Pit N	Site clearance works were conducted.
	Velodrome – Pit P	TBM pipe jacking works were conducted.
	Mau Wu Tsai – Workfront 2	Trench excavation and pipe laying works were conducted.
	Po Lam Road South	Trench excavation and pipe laying works were conducted.
	Po Lam Road (D2)	<ul> <li>Trench excavation and pipe laying works were conducted.</li> </ul>
	Po Lam Road (C2)	<ul> <li>Pre-drilling works for mini piling of pipe bridge at Location A westside slope were conducted.</li> </ul>
	Po Lam Road (B4)	<ul> <li>Trench rock breaking works were conducted.</li> <li>Trench excavation and pipe laying works</li> </ul>
	Tsui Lam Road	<ul> <li>were conducted.</li> <li>Bamboo platform erection works were conducted.</li> </ul>
	TKO Primary Service Reservoir	Trench excavation and pipe laying works were conducted.

- A6. The major environmental impacts brought by the above construction works include:
  - Construction dust and noise generation from saw cutting of concrete surface, mainlaying of pipes, TBM break through, sheetpiling and pipe jacking works, excavation and drilling works
  - Waste generation from the construction activities
  - Impact on water quality from construction activities
- A7. The key environmental mitigation measures implemented for the Project in this reporting period associated with the above construction works include:



- Reduction of construction dust generation from saw cutting of concrete surface, mainlaying of pipes, TBM break through, sheetpiling and pipe jacking works, excavation and drilling works
- Reduction of noise from equipment and machinery on-site
- Sorting and storage of general refuse and construction waste
- Treatment of wastewater through water treatment facilities before discharge

#### Summary of Exceedance & Investigation & Follow-up

- A8. Noise monitoring was scheduled in the reporting month for NSR4 Creative Secondary School on 1, 8, 17, 21 and 31 December 2021 as construction works were conducted within 300m to the noise sensitive receiver. No project-related exceedance of the Action and Limit Level was recorded during the reporting period.
- A9. No examinations were scheduled in the reporting month for NSR4 Creative Secondary School. Academic School Calendar can be found in **Appendix O**.

#### **Complaint Handling and Prosecution**

- A10. No project-related environmental complaint was received in the reporting month.
- A11. Neither notifications of summons nor prosecution was received for the Project in the reporting month.

# **Reporting Change**

A12. There were no changes reported that may affect the on-going EM&A programme.

#### **Summary of Upcoming Key Issues and Key Mitigation Measures**

A13. Key works in January 2022 (the next reporting month) for the Project will include the followings:

Location	Location	Forecast Works in Next Reporting Month
Portion H of the Project Site	TKO 137 Pit A	Pipe installation works inside sleeve pipe between Pit 137A to Pit 137C will be conducted.
	TKO 137 Pit B	Pipe installation works inside sleeve pipe between Pit 137A to Pit 137C will be conducted.
	TKO 137 Pit C	Pipe installation works inside sleeve pipe between Pit 137A to Pit 137C will be conducted.
	Wan Po Rd – Workfront 1	<ul> <li>Curtain grouting works for the receiving pit 1 will be conducted.</li> </ul>
Portion J of the Project Site	Wan Po Rd – Workfront 2	<ul> <li>Excavation and ELS works for jacking pit 2 will be conducted.</li> </ul>
	Wan Po Rd – Workfront 3	Trench excavation and pipe laying works will be conducted.



Location	Location	Forecast Works in Next Reporting Month
	Wan Po Rd – Workfront 4	Trench excavation and pipe laying works will be conducted.
	Wan Po Rd – Pit A	Remedial works for pit will be conducted.
	Wan Po Rd – Pit B	<ul> <li>Preparation works for MTBM pipe jacking will be conducted.</li> <li>MTBM pipe jacking will be commenced.</li> </ul>
	Shek Kok Road – Pit D	MTBM pipe jacking will be commenced.
	Shek Kok Road – Hand-shield	Modification works of existing retaining wall will be conducted
	Landfill Stage 1 – Area A	Trench excavation and pipe laying works will be conducted.
	Pet Garden's Road	<ul> <li>Trench excavation and pipe laying works will be conducted.</li> </ul>
	Pung Loi Road – Pit WPR1	<ul> <li>Excavation and ELS works for jacking pit will be conducted.</li> </ul>
	Roundabout – Pit G1A	<ul> <li>Pit excavation and ELS works will be conducted.</li> <li>Receiving pit construction will be completed.</li> </ul>
	Velodrome – Pit K	Pipe installation works inside sleeve pipe between Pit K to Pit L will be conducted.
	Velodrome – Pit M	Pipe installation inside sleeve pipe between Pit M1 to Pit M2 will be conducted.
	Velodrome – Pit O to Pit N	Trench excavation works will be conducted.
	Velodrome – Pit O to Pit P	• Site setup works for trenchless works will be conducted.
	Velodrome – Pit P	TBM pipe jacking will be continued.
	Mau Wu Tsai – Workfront 1	<ul> <li>Trench excavation and pipe laying works will be conducted.</li> </ul>
	Mau Wu Tsai – Workfront 2	<ul> <li>Trench excavation and pipe laying works will be conducted.</li> </ul>
	Po Lam Road South	Trench excavation and pipe laying works will be conducted.
	Po Lam Road (D2)	Trench excavation and pipe laying works will be conducted.
	Po Lam Road (C2)	Pre-drilling works for mini piling of pipe bridge at Location A westside slope will be conducted.
	Po Lam Road (B4)	<ul> <li>Trench rock breaking works will be conducted.</li> <li>Trench excavation and pipe laying works</li> </ul>
		will be conducted.



Location	Location	Forecast Works in Next Reporting Month
	Tsui Lam Road	Bamboo platform erection works will be continued.
	TKO Primary Service Reservoir	Trench excavation and pipe laying works will be conducted.

- A14. The major environmental impacts brought by the above construction works will include:
  - Construction dust and noise generation of saw cutting of concrete surface, mainlaying of pipes, drilling activities, TBM break through, sheetpiling works and excavation works.
  - Waste generation from construction activities
  - Impact on water quality from construction activities
- A15. The key environmental mitigation measures for the Project in the coming reporting period associated with the above construction works will include:
  - Reduction of construction dust generation of saw cutting of concrete surface, mainlaying of pipes, drilling activities, TBM break through, sheetpiling works and excavation works by regular water spraying and covering of dusty materials with screenings
  - Reduction of noise from equipment and machinery on-site
  - Sorting and storage of general refuse and construction waste
  - Treatment of wastewater through water treatment facilities before discharge



# 1. Basic Project Information

#### 1.1 Background

The proposed Desalination Plant at Tseung Kwan O (DPTKO) will produce potable water with an initial capacity of 135 million liters per day (MLD), expandable to an ultimate capacity of 270 MLD in the future to provide a secure and alternative fresh water resource complying with the World Health Organization (WHO) standards. The plant will adopt the Seawater Reverse Osmosis (SWRO) technology, which dominates the market due to its reliability and progressive reduction in cost as the technology advances.

Pursuant to the Environmental Impact Assessment Ordinance (EIAO), the Director of Environmental Protection granted the Variation of Environmental Permit (No. EP-503/2015/A) to Water Supplies Department (WSD) for the Project on 26 January 2018.

The scope of the Contract may be considered in brief, to consist of the laying of about 10km long 1200mm diameter fresh water mains and the associated works along the alignment of the Project as shown with the overall view in **Appendix B.** 

#### 1.2 The Reporting Scope

This is the 41<sup>th</sup> Monthly EM&A Report for the Project which summarizes the key findings of the EM&A programme during the reporting period from 1 December 2021 to 31 December 2021.

#### 1.3 Project Organization

The Project Organization structure for Construction Phase is presented in Figure 1.1.



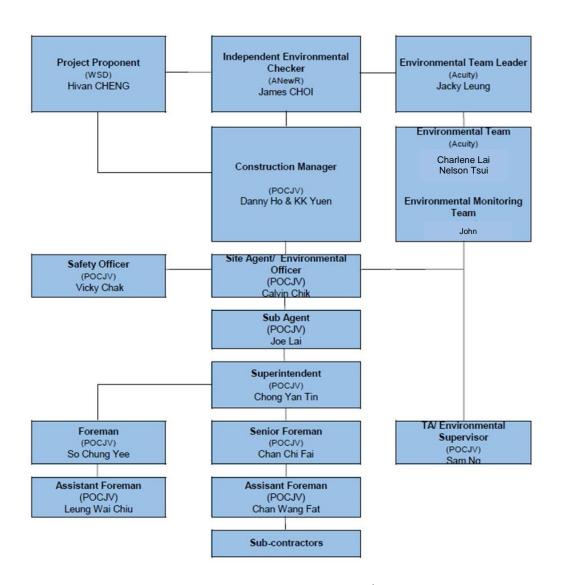


Figure 1.1 Project Organization Chart

Contact details of the key personnel are presented in **Table 1.1** below:

Party	Position	Name	Telephone no.
Penta-Ocean - Concentric Joint Venture	Environmental Officer	Calvin Chik	9863 5630
Acuity Sustainability Consulting Limited	Environmental Team Leader	Jacky Leung	2698 6833



Party	Position	Name	Telephone no.
ANewR Consulting Limited	Independent Environmental Checker	James Choi	2618 2831

# 1.4 Summary of Construction Works

Details of the major construction works undertaken in this reporting period are shown in **Table 1.2** and the construction work locations are shown **in Appendix B**. The construction programme is presented in **Appendix A**.

Table 1.2 Summary of the Construction Works Undertaken during the Reporting Month

Location	Location	Works Conducted in the reporting month
	TKO 137 Pit A	<ul> <li>Preparation works of pipe installation inside sleeve pipe between Pit 137A to Pit 137C were conducted.</li> </ul>
Portion H of the Project Site	TKO 137 Pit B	<ul> <li>Preparation works of pipe installation inside sleeve pipe between Pit 137A to Pit 137C were conducted.</li> </ul>
	TKO 137 Pit C	<ul> <li>Preparation works of pipe installation inside sleeve pipe between Pit 137A to Pit 137C were conducted.</li> </ul>
	Wan Po Rd – Workfront 1	<ul> <li>Mini piling works for ELS of receiving pit 1 construction were conducted.</li> </ul>
	Wan Po Rd – Workfront 2	<ul> <li>Curtain grouting for mini piling works of jacking pit 2 was conducted.</li> </ul>
	Wan Po Rd – Workfront 3	<ul> <li>Pipe trench excavation and pipe laying were in-progress.</li> </ul>
	Wan Po Rd – Workfront 4	<ul> <li>Pipe trench excavation and pipe laying were in-progress.</li> </ul>
	Wan Po Rd – Pit A	Remedial works for pit was conducted.
Portion J of the	Wan Po Rd – Pit B	<ul> <li>Preparation works for TBM pipe jacking were conducted.</li> </ul>
Project Site	Shek Kok Road – Pit D	<ul> <li>Preparation works for MTBM pipe jacking were conducted.</li> </ul>
	Shek Kok Road – Hand-shield	<ul> <li>Modification of existing retaining wall was conducted.</li> </ul>
	Landfill Stage 1 – Area A	Pipe trench excavation and pipe laying were in-progress.
	Pet Garden's Road	Pipe trench excavation and pipe laying were in-progress.
	Pung Loi Road – Pit WPR1	Sheetpile driving works for pit ELS were conducted.



Location	Location	Works Conducted in the reporting month		
	Roundabout – Pit G1A	Pit excavation and ELS works were conducted.		
	Velodrome – Pit K	Preparation works for pipe laying were conducted.		
	Velodrome – Pit M	Pipe installation inside sleeve pipe between Pit M1 to Pit M2 was conducted.		
	Velodrome – Pit N	Site clearance works were conducted.		
	Velodrome – Pit P	TBM pipe jacking works were conducted.		
	Mau Wu Tsai – Workfront 2	Trench excavation and pipe laying works were conducted.		
	Po Lam Road South	Trench excavation and pipe laying works were conducted.		
	Po Lam Road (D2)	Trench excavation and pipe laying works were conducted.		
	Po Lam Road (C2)	Pre-drilling works for mini piling of pipe bridge at Location A westside slope were conducted.		
	Po Lam Road (B4)	Trench rock breaking works were conducted.		
		<ul> <li>Trench excavation and pipe laying works were conducted.</li> </ul>		
	Tsui Lam Road	Bamboo platform erection works were conducted.		
	TKO Primary Service Reservoir	Trench excavation and pipe laying works were conducted.		

A summary of the valid permits, licences, and or notifications on environmental protection for this Project is presented in **Table 1.3.** 

Table 1.3 Summary of the Status of Valid Environmental Licence, Notification, Permit and Documentations

Permit/ Licences/ Notification	Reference	Validity Period	Remarks
Variation of Environmental Permit	EP no.: EP-503/2015/A	Throughout the Contract	-
Notification of Construction Works under the Air Pollution Control (Construction Dust) Regulation (Form NA)	Ref no.: 423775	Throughout the Contract	-
Chemical Waste Producer Registration	WPN: 5213-839-P3287-01	Throughout the Contract	-
Billing Account for Disposal of Construction Waste	A/C no.: 7029491	Throughout the Contract	-
Water Discharge Licence	WT00032336-2018	Until 31 Dec 2023	-
Construction Noise Permit (Hong Kong Velodrome)	GW-RE1219-21	Until 01 April 2022	-



Construction Noise Permit			
(Wan Po Road near Wan O Road and	GW-RE1211-21	Until 01 April 2022	-
Chun Yat Street, Tseung Kwan O, N.T.)			
Construction Noise Permit			
(Shek Kok Road near Shrewsbury			
International School Hong Kong, Tseung	GW-RE1224-21	Until 01 April 2022	-
Kwan O, N.T.)			

The status for all environmental aspects is presented **Table 1.4**.

Table 1.4 Summary of Status for Key Environmental Aspects under the EM&A Manual

Parameters Status					
	Noise				
Baseline Monitoring	Baseline Monitoring  The baseline noise monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under VEP Condition 3.4.				
Impact Monitoring On-going					
	Waste Management				
Mitigation Measures in Waste Monitoring Plan On-going					
Landfill Gas					
Impact Monitoring On-going					
_	Environmental Audit				
Site Inspection	On-going				

Other than the EM&A works by ET, regular environmental management meetings were conducted in order to enhance environmental awareness and closely monitor the environmental performance of the contractors.

The EM&A programme has been implemented in accordance with the recommendations presented in the approved EIA Report and the EM&A Manual. A summary of implementation status of the environmental mitigation measures for the construction phase of the Project during the reporting period is provided in **Appendix C**.



# 2. Noise Monitoring

#### 2.1 Monitoring Requirements

To ensure no adverse noise impact, noise monitoring is recommended to be carried out within 300m radius from the nearby noise sensitive receivers (NSRs), during construction phase. The NSRs selected as monitoring station are (i) NSR4 – Creative Secondary School, (ii) NSR24 – PLK Laws Foundation College, and (iii) NSR31 – School of Continuing and Professional Studies – CUHK respectively.

In accordance with the EM&A Manual, baseline noise level at the noise monitoring stations were established as presented in the Baseline Monitoring Report. Impact noise monitoring will be conducted once per week in the form of 30-minute measurements Leq, L10 and L90 levels recorded at each monitoring station between 0700 and 1900 on normal weekdays.

Referring to EM&A manual Section 4.1.2, the impact noise monitoring should be carried out at all the designated monitoring stations when there are project-related construction activities undertaken within a radius of 300m from the monitoring stations.

Impact monitoring for noise impact was conducted in the reporting month for NSR4 – Creative Secondary School on 1, 8, 17, 21 and 31 December 2021 as construction works were conducted within 300m to the noise sensitive receiver. Detailed monitoring results can be found in **Appendix G**.

No examinations were scheduled in the reporting month for NSR4 Creative Secondary School. Academic School Calendar can be found in **Appendix O**.

#### 2.2 Noise Monitoring Parameters, Time, Frequency

Impact noise monitoring was conducted weekly in the reporting period between 0700-1900 on normal weekdays. Construction works would follow the requirements as stipulated in the valid CNPs if works have to be conducted during 1900-0700 in all days or any time on Sundays or general holidays.

Construction noise level was measured in terms of the A-weighted equivalent continuous sound pressure level (LAeq). Leq 30min was used as the monitoring parameter for the time period between 0700 and 1900 on normal weekdays. **Table 2.1** summarizes the monitoring parameters, frequency and duration of the impact noise monitoring. The monitoring schedule is provided in **Appendix D**.

Table 2.1 Noise Monitoring Parameters, Time, Frequency and Duration

Time	Frequency	Duration	Parameters
Daytime: 0700-1900	Once per week	Continuously in $L_{eq 5min}/L_{eq 30min}$ (average of 6 consecutive $L_{eq 5min}$ )	Leq, L10 & L90



# 2.3 Noise Monitoring Locations

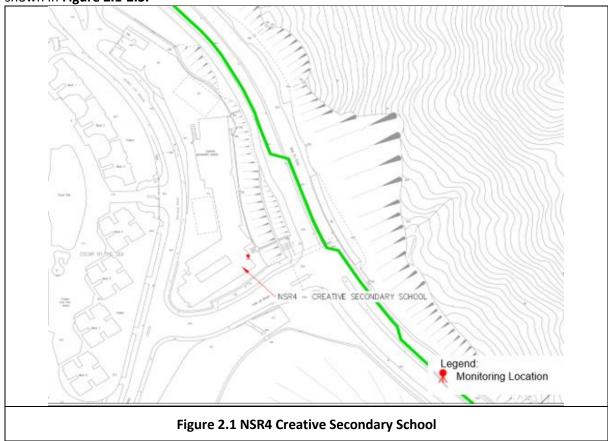
The monitoring locations should normally be made at a point 1m from the exterior of the NSRs building façade and be at a position 1.2m above the ground. A correction of +3dB(A) should be made to the free-field measurements.

According to the environmental findings detailed in the EIA report and Baseline Monitoring Report, the designated locations for the construction noise monitoring are listed in **Table 2.2** below.

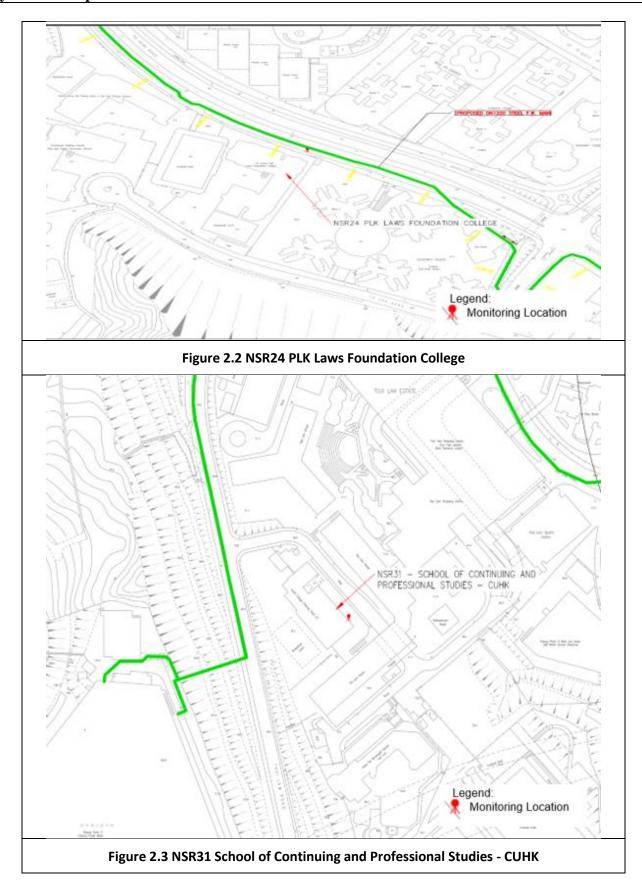
**Table 2.2 Noise Monitoring Location** 

NSR ID	Noise Sensitive Receivers	Monitoring Location	Position
NSR 4	Creative Secondary School	Roof Floor	1 m from facade
NSR 24	PLK Laws Foundation College	Pedestrian Road on Ground Floor	Free-field
NSR 31	School of Continuing and Professional Studies - CUHK	Roof Floor	1 m from facade

Three noise monitoring locations for impact monitoring at the nearby sensitive receivers are shown in **Figure 2.1-2.3.** 









# 2.4 Impact Monitoring Methodology

Integrated sound level meters were used for the noise monitoring. The meters were in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications. Immediately prior to and following each noise measurement the accuracy of the sound level meters was checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements may be accepted as valid only if the calibration level before and after the noise measurements agree to within 1.0 dB(A). Calibration certificates of the instruments used are presented in **Appendix E**. Noise measurements were not made in the presence of fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s. The wind speed would be checked with a portable wind speed meter capable of measuring the wind speed in m/s.

Table 2.3 Impact Noise Monitoring Equipment

Equipment	Brand and Serial Model Number		Date of Calibration Calibration Calibration Expiry Date		Detection Limit	
Sound Level Meter	Svantek 971	96062	05/07/2021	04/07/2022	20-140 dB(A)	
Sound Level Meter	NTi XL2	A2A-13661- E0	23/09/2021	22/09/2022	30-130 dB(A)	
Sound Level Meter	NTi XL2	A2A-17638- E0	24/03/2021	23/03/2022	30-130 dB(A)	
Sound Level Meter Calibrator	Pulsar 105	63705	07/08/2021	06/08/2022	Nil	
Pocket Wind Meter Anemometer	Kestrel 1000 Wind Meter	Nil	Nil	Nil	Nil	

#### 2.5 Action and Limit Levels

The Action/Limit Levels are in line with the criteria of Practice Note for Professional Persons (ProPECC PN 2/93) "Noise from Construction Activities — Non-statutory Controls" and Technical Memorandum on Environmental Impact Assessment Process issued by HKSAR Environmental Protection Department ["EPD"] under the Environmental Impact Assessment Ordinance, Cap 499, S.16 are presented in **Table 2.4.** 

Table 2.4 Action and Limit Levels for Noise

Time Period	Action Level	Limit Level (dB(A))		
0700-1900 on normal weekdays	When one documented complaint is received from any one of the noise sensitive receivers	<ul> <li>70 dB(A) for school and</li> <li>65 dB(A) during examination period</li> </ul>		
Notes:  (a) Limits specified in the GW-TM and IND-TM for construction and operation noise, respectively.				

If exceedances are found during noise monitoring, the actions in accordance with the Event and Action Plan will be carried out according to **Appendix F**.



#### 2.6 Monitoring Results and Observations

Referring to EM&A manual Section 4.1.2, impact monitoring for noise impact was scheduled weekly in the reporting month for NSR4 – Creative Secondary School on 1, 8, 17, 21 and 31 December 2021. Detailed monitoring results are presented in **Appendix G**.

No examinations were scheduled in the reporting month for NSR4 Creative Secondary School. Academic School Calendar can be found in **Appendix O.** 

No construction works were conducted within 300m radius of NSR24 and NSR31. Thus, no monitoring works was carried at these two locations in the reporting month.

### 3. WASTE MANAGEMENT

3.1 The waste generated from this Project includes inert construction and demolition (C&D) materials, and non-inert C&D materials. Non-inert C&D materials are made up of general refuse, vegetative wastes and recyclable wastes such as plastics and paper/cardboard packaging waste. Steel materials generated from the project are also grouped into non-inert C&D materials as these materials were not disposed of with other inert C&D materials. With reference to relevant handling records and trip tickets of this Project, the quantities of different types of waste generated in the reporting month are summarised in **Table 3.1**. Details of cumulative waste management data are presented as a waste flow table in **Appendix H**.

Table 3.1 Quantities of waste generated from the Project

	Quantity					
Reporting period	Materials	Chemical Waste (in '000kg)	Non-inert C&D Materials			
			Others, e.g. General Refuse disposed at			
			Landfill	Paper/card board (in '000kg)	Plastics (in '000kg)	Metals (in '000kg)
December-21	1.050	0.000	0.002	0.048	0.000	0.000



#### 4. LANDFILL GAS MONITORING

#### 4.1 Monitoring Requirement

In accordance with Section 11 of the EM&A Manual, monitoring of landfill gas is required for construction works within the 250m Consultation Zone. Part of the desalination plant and the indicative area of natural slope mitigation works fall within the SENT Landfill Extension Consultation Zone; and part of the 1,200 mm diameter fresh water mains along Wan Po Road falls within the SENT Landfill and SENT Landfill Extension Consultation Zones, TKO Stage II/III Restored Landfill and TKO Stage I Restored Landfill Consultation Zones.

# 4.2 Monitoring Location

Monitoring of oxygen, methane, carbon dioxide and barometric pressure was performed for excavations at 1m depth or more within the consultation Zone. In this reporting period, 417 times of monitoring was recorded.

During construction of works within the consultation zones, excavations of 1m depth or more was monitored:

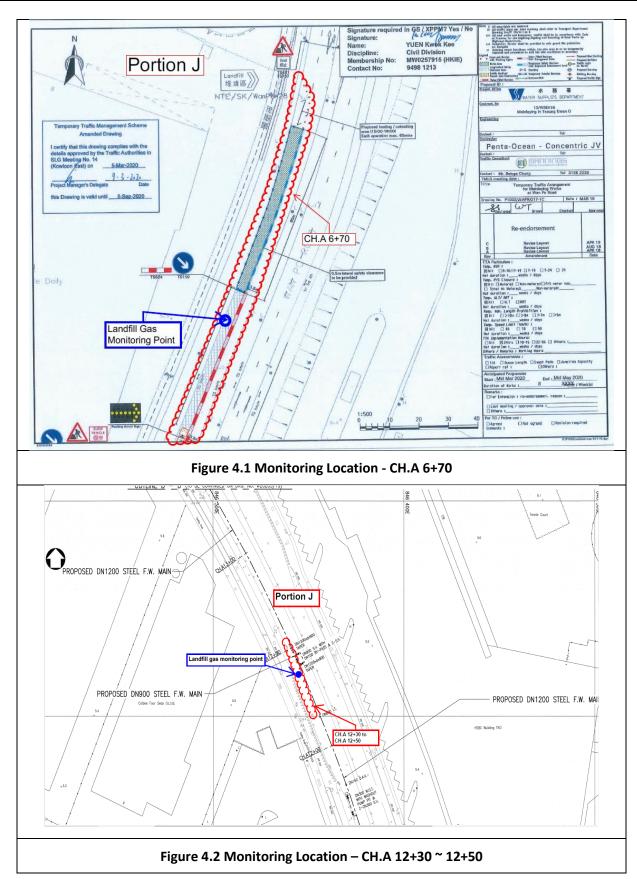
- At the ground surface before excavation commences;
- Immediately before any worker enters the excavation;
- At the beginning of each working day for the entire period when the excavation remains open; and
- Periodically through the working day whilst workers are in the excavation.

For excavations between 300mm and 1m deep, measurements should be carried out:

- Directly after the excavation has been completed; and
- Periodically whilst the excavation remains open.

The area required to be monitored for landfill gas in the reporting period are shown in **Figure 4.1** to **Figure 4.20**.







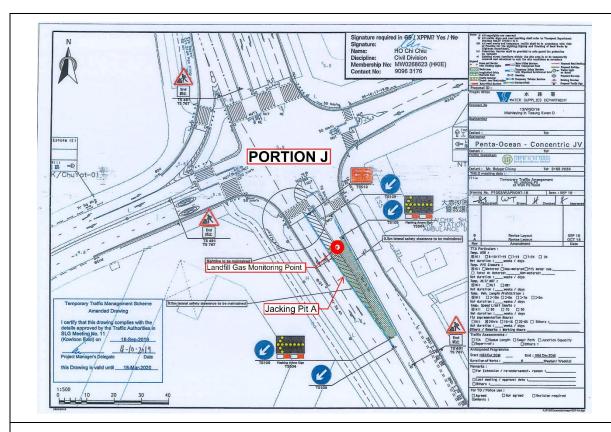


Figure 4.3 Monitoring Location – CH.A 13+50 ~ 14+00 (Pit A)

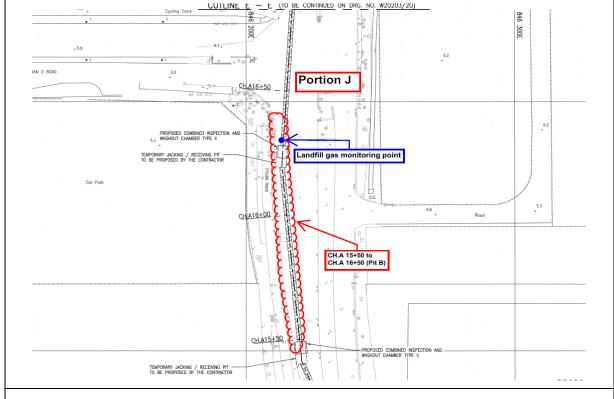


Figure 4.4 Monitoring Location – CH.A 15+50 ~16+50 (Jacking Pit B)



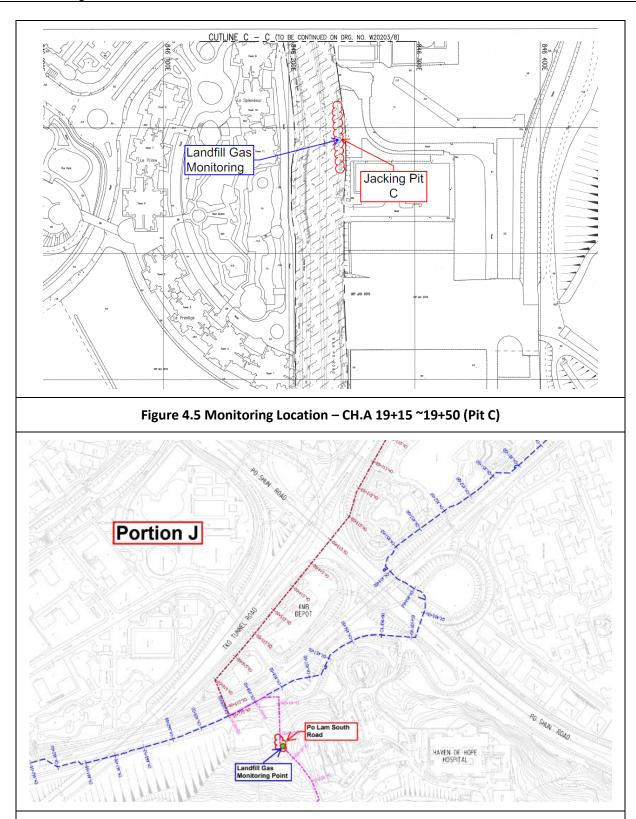


Figure 4.6a Monitoring Location – Mau Wu Tsai 1



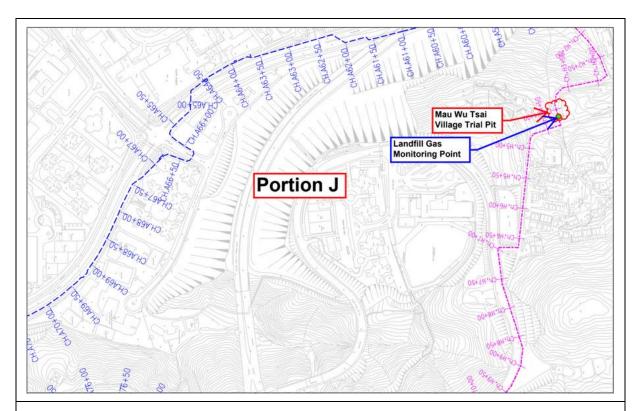


Figure 4.6b Monitoring Location – Mau Wu Tsai 2

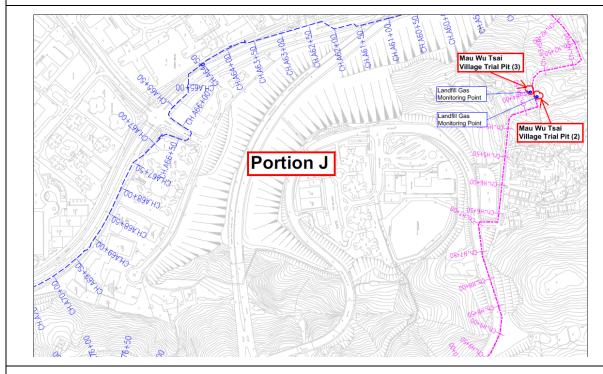
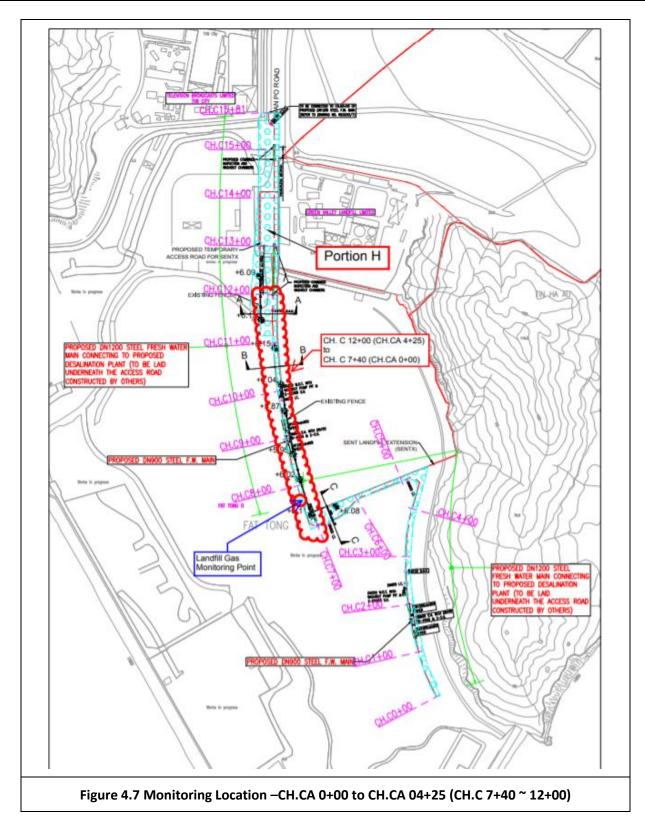


Figure 4.6c Monitoring Location – Mau Wu Tsai 3







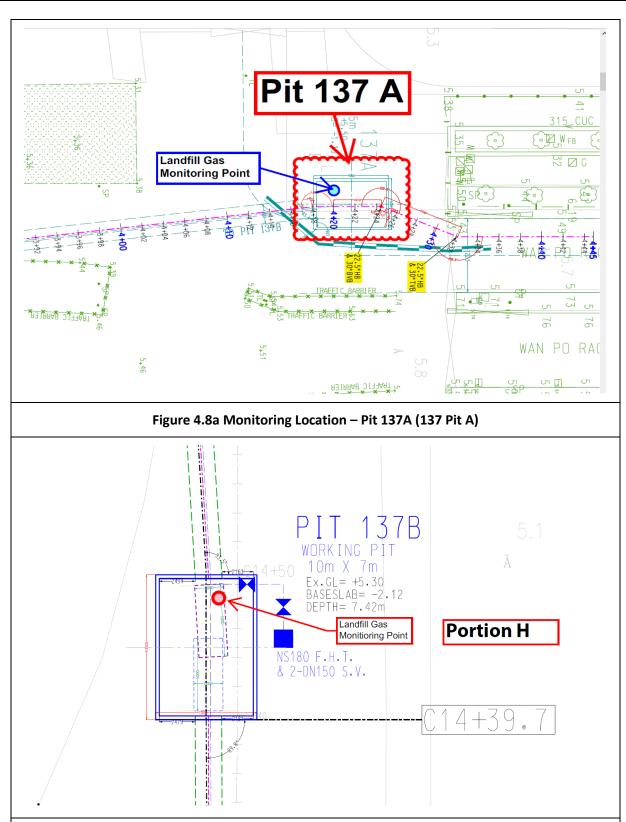


Figure 4.8b Monitoring Location - Pit 137B (137 Pit B)



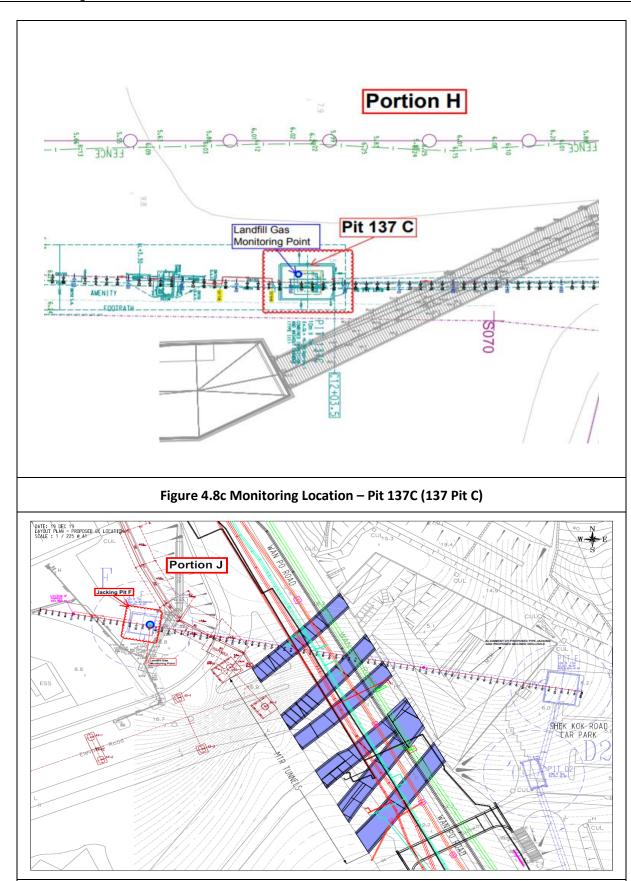
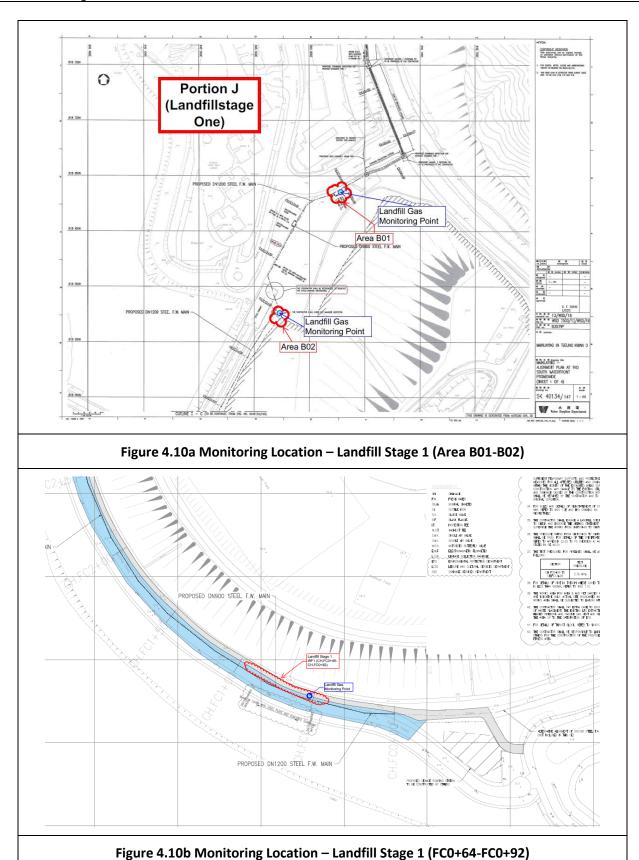


Figure 4.9 Monitoring Location - Jacking Pit F







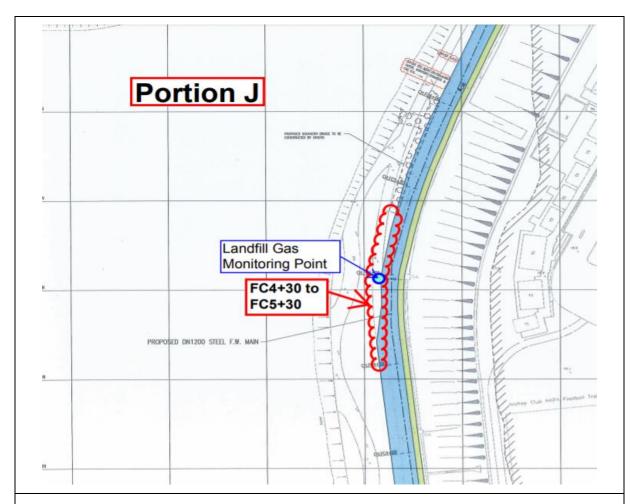


Figure 4.10c Monitoring Location – Landfill Stage 1 (FC4+30-FC5+30)

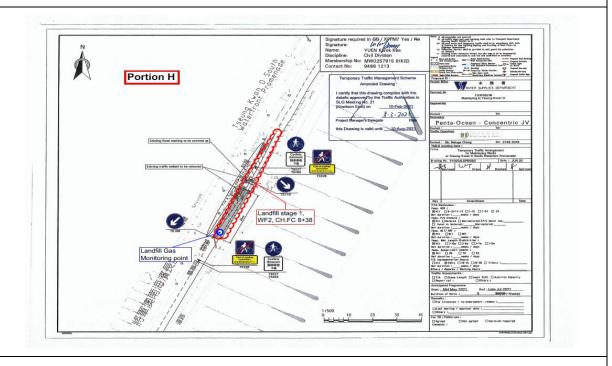


Figure 4.10d Monitoring Location – Landfill Stage 1 (FC8+38)



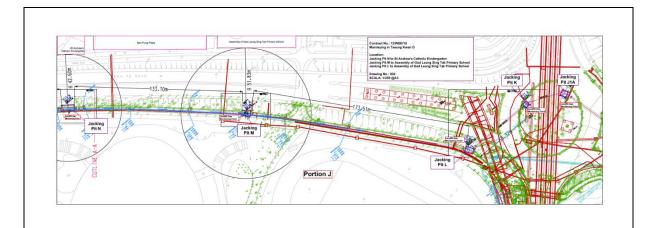


Figure 4.11a Monitoring Location – Pit L-M-N, J1A, K

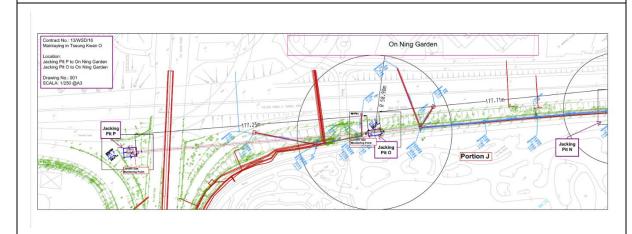


Figure 4.11b Monitoring Location – Pit N-O-P



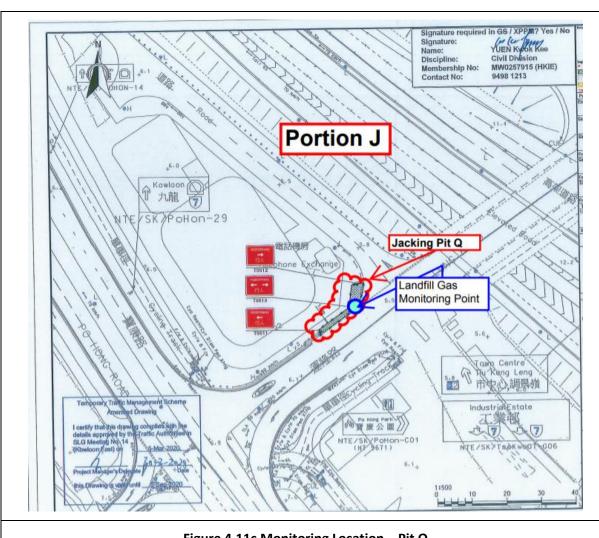


Figure 4.11c Monitoring Location – Pit Q

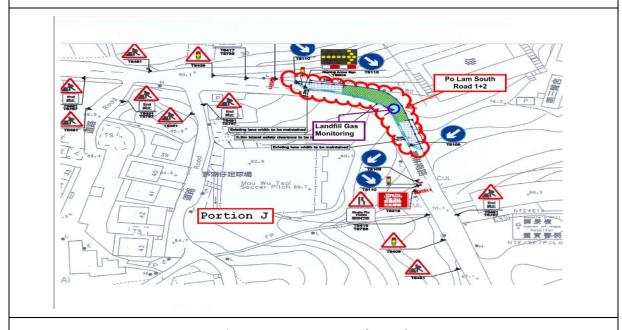


Figure 4.12 Po Lam South Road



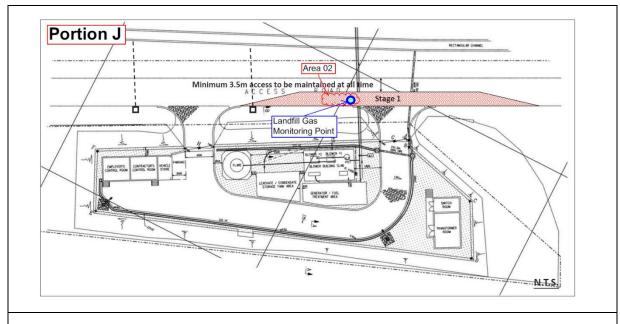


Figure 4.13 Monitoring Location – Area A02

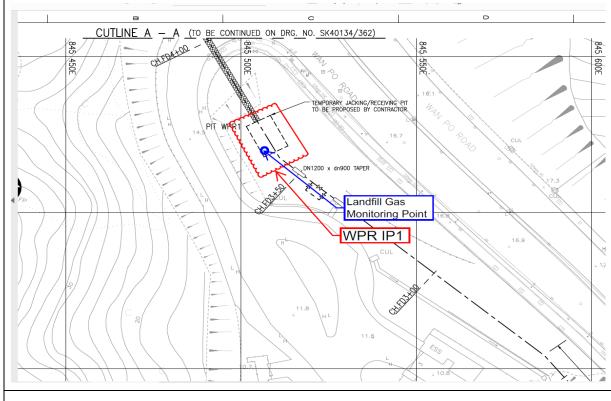


Figure 4.14 Monitoring Location – WPR IP1



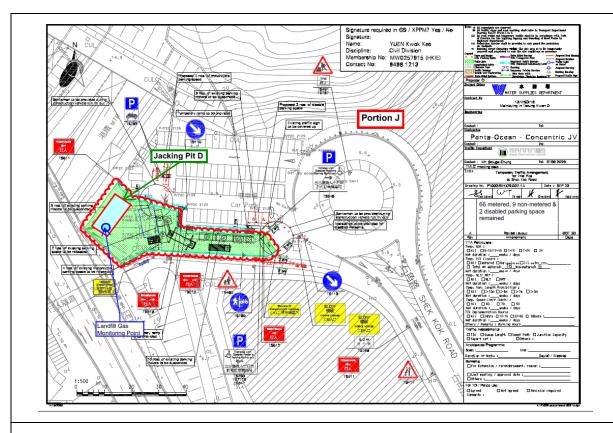


Figure 4.15 Monitoring Location – Jacking Pit D

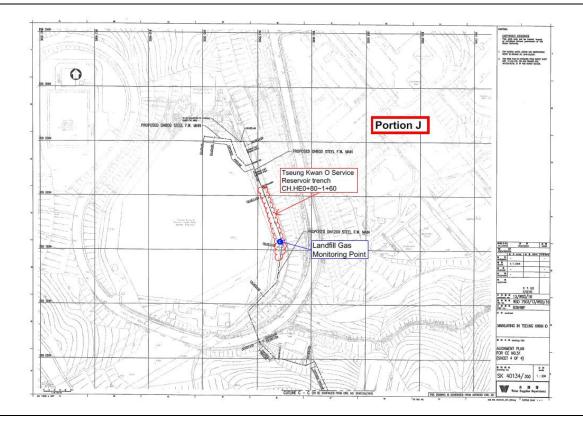


Figure 4.16 Monitoring Location - CH.HE0+80-1+60



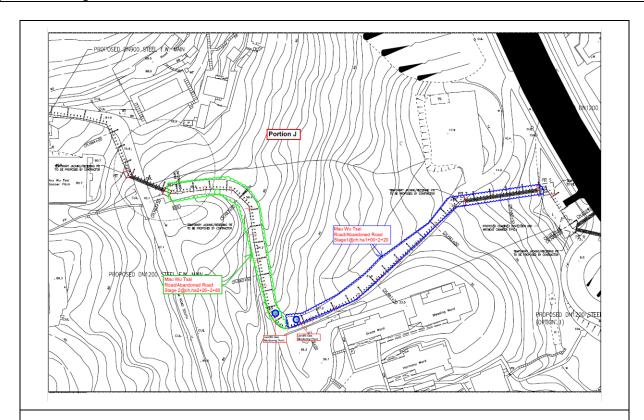


Figure 4.17 Monitoring Location – Mau Wu Tsai Abandoned Road

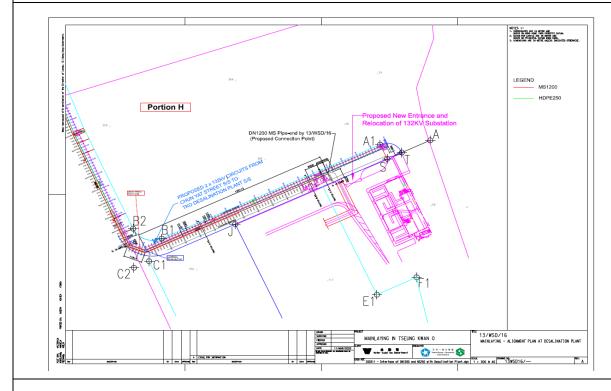


Figure 4.18a Monitoring Location - CH.CT 0+07 ~ 2+58



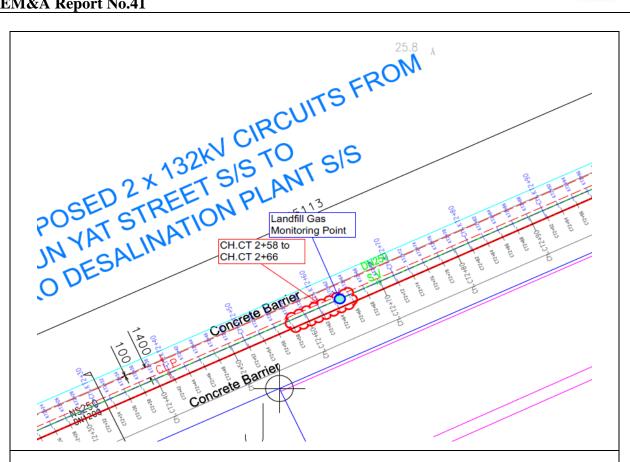


Figure 4.18b Monitoring Location - CH.CT 2+58 ~ 2+66

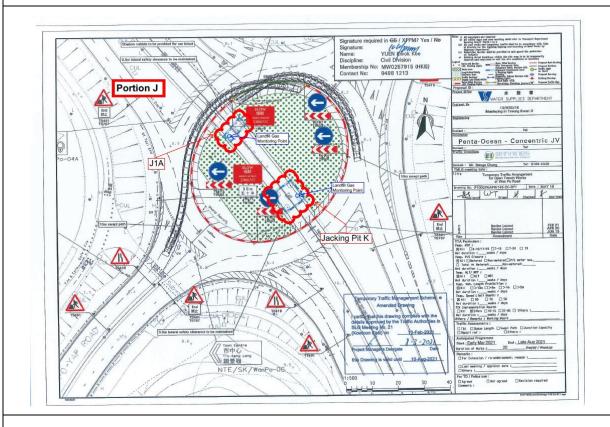


Figure 4.19 Monitoring Location – Pit K



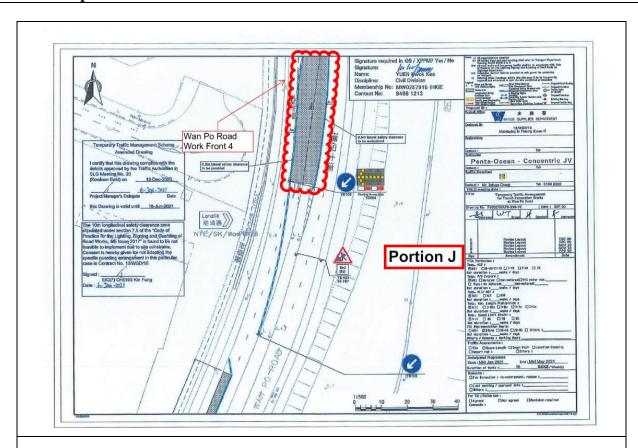


Figure 4.20a Monitoring Location - Wan Po Road 4

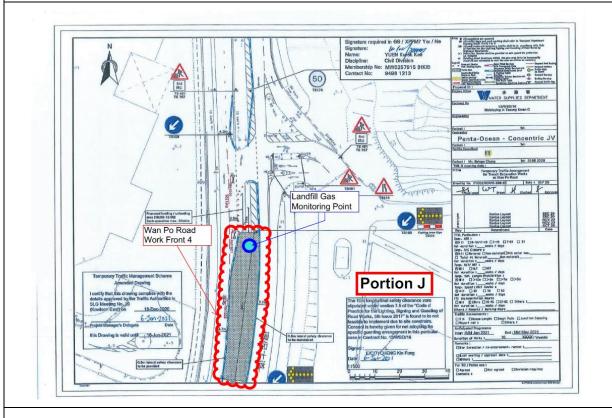


Figure 4.20b Monitoring Location - Wan Po Road 4



#### 4.3 Monitoring Parameters

LFG monitoring was carried out to identify any migration between the landfill and the Project and to ensure the safety of the construction, operation and maintenance personnel working on-site, visitors and any other person within the Project area.

The following parameters were monitored:

- Methane.
- Oxygen.
- Carbon Dioxide.
- Barometric Pressure.

#### 4.4 Action and Limit Level

Action and Limit Level are provided in Table 4.1.

Table 4.1 Action and Limit Level for Landfill Gas Monitoring Equipment

Parameters	Action Level	Limit Level
Oxygen (O2)	<19% O2	<19% O2
Methane (CH4)	>10% LEL	>80% LEL
Carbon Dioxide (CO2)	>0.5% CO2	>1.5% CO2

### 4.5 Monitoring Equipment

Landfill Gas monitoring was carried out using intrinsically-safe, portable multi-gas monitoring instruments. The gas monitoring equipment is:

- Complying with the Landfill Gas Hazard Assessment Guidance Note as intrinsically safe;
- Capable of continuous barometric pressure and gas pressure measurements;
- Normally operated in diffusion mode unless required for spot sampling, when it should be capable of operating by means of an aspirator or pump;
- Having low battery, fault and over range indication incorporated;
- Capable of storing monitoring data, and shall be capable of being down-loaded directly;
- Measure in the following ranges:



methane	0-100% Lower Explosion Limit (LEL) and 0-100% v/v;
oxygen	0-25% v/v;
carbon dioxide	0-5% v/v; and
barometric pressure	mBar (absolute)

• alarm (both audibly and visually) in the event that the concentrations of the following are exceeded:

methane	>10% LEL;
oxygen	<19% by volume; and
carbon dioxide	>0.5% by volume
barometric pressure	mBar (absolute)

Monitoring Equipment used in the reporting period are summarised in **Table 4.2.** The Landfill Gas monitoring equipment calibration certificate is presented in **Appendix I.** 

Table 4.2 Landfill Gas Monitoring Equipment used in the Reporting Month

Equipment	Brand and Model	Calibration Expiry Date
Portable Gas Detector	QRAE III	27 July 2022
MultiRAE Lite	PGM-6208 M01C031772	05 April 2022

## 4.6 Monitoring Results

In the reporting period, construction works within the consultation zones, excavations of 1m depth or more was monitored. Landfill gas monitoring was carried out by the Registered Safety Officer of the Contractor at the excavation locations for 417 times. All the measured results were presented in **Appendix J** and were within the Action and Limit Levels.



# 5. SUMMARY OF MONITORING EXCEEDANCE, COMPLAINTS, NOTIFICATION OF SUMMONS AND PROSECUTIONS

5.1 The Environmental Complaint Handling Procedure is shown in below Figure 5.1:

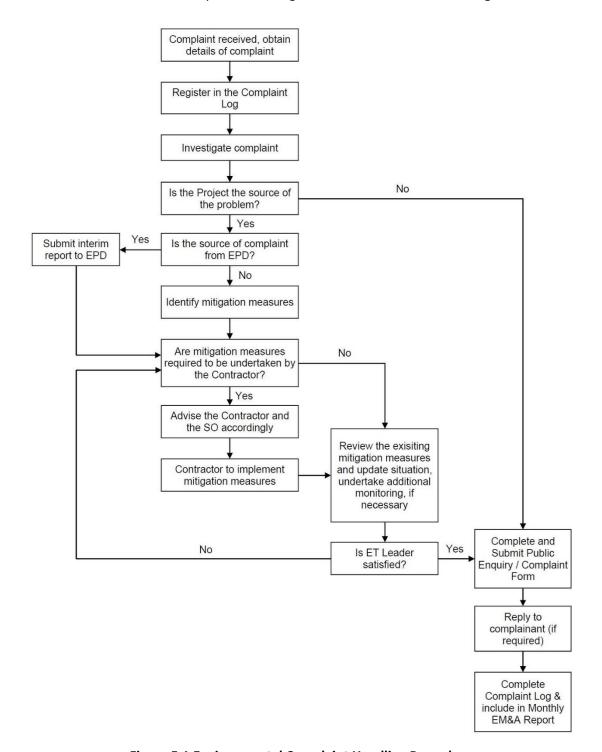


Figure 5.1 Environmental Complaint Handling Procedure



- 5.2 Impact monitoring for noise impact was scheduled in the reporting month for NSR4 Creative Secondary School on 1, 8, 17, 21 and 31 December 2021 as construction works were conducted within 300m to the noise sensitive receiver. Detailed monitoring results can be found in **Appendix G**.
- 5.3 No examinations were scheduled in the reporting month for NSR4 Creative Secondary School. Academic School Calendar can be found in **Appendix O**.
- 5.4 No project-related exceedance of the Action Level was recorded during the reporting period.
- 5.5 No project-related environmental complaint was received in the reporting month.
- 5.6 No notification of summons and prosecution was received in the reporting period.
- 5.7 Statistics on complaints and regulatory compliance are summarized in **Appendix K**.

#### 6. EM&A SITE INSPECTION

6.1 Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures under the Contract. In the reporting period, site inspections were carried out on 2, 9, 16, 23 and 29 December 2021 at the site portions list in **Table 6.1** below.

**Table 6.1 Site Inspection Record** 

Date	Inspected Site Portion	Time
02 December 2021	Portion J	09:30am – 11:30pm
09 December 2021	Portion J	09:50am – 11:40am
16 December 2021	Portion J	09:30am – 11:30am
23 December 2021	Portion J	09:15am – 12:00pm
29 December 2021	Portion J	09:30am – 11:30am

- 6.2 One joint site inspection with IEC was carried out on 23 December 2021.
- 6.3 Minor deficiencies were observed during weekly site inspections. Key observations during the site inspections are summarized in **Table 6.2**.

**Table 6.2 Site Observations** 

Date	Environmental Observations Follow-up Status
	1. No environmental permit was 1. Environmental permit was added.
	observed at the site 2. There was no water pumping at
	exit/entrance at Pit P. the construction site.
02 December	2. The Main Contractor was 3. There was no grouting process at
2021	reminded that no water pit M.
	should be discharged without 4. Chemical stain was cleaned.
	treatment at the Hong Kong
	Velodrome Pit O.



Date	Environmental Observations	Follow-up Status
	<ol> <li>The Main Contractor was reminded that 3 side enclosure should be provided for concrete mixing at Pit M at Hong Kong Velodrome.</li> <li>Chemical stain was observed at Pit L at Hong Kong Velodrome.</li> </ol>	
09 December 2021	<ol> <li>Construction materials should not be placed at the planter area at Pit D.</li> <li>Dusty materials should not be placed directly next to water barriers to prevent the escape of these materials from the construction site at Pit B.</li> <li>The Main Contractor was reminded that no water should be discharged without treatment at Pit B.</li> </ol>	<ol> <li>Construction materials were cleaned.</li> <li>Dusty materials were cleaned.</li> <li>There was no water discharge at site.</li> </ol>
16 December 2021	<ol> <li>Chemicals were observed not placed on a drip tray at Pit X.</li> <li>Environmental permit was not observed at Pit X site entrance or exit.</li> </ol>	<ol> <li>Chemicals were removed.</li> <li>Environmental permit was added at site.</li> </ol>
23 December 2021	No major observations were recorded on the reporting day.	
29 December 2021	<ol> <li>Gully was not protected by sandbags and geotextile at Wan Po Road 2.</li> <li>Construction boundary was not protected by sandbags fully at Wan Po Road 2 and Wan Po Road 3.</li> <li>Construction materials should not be placed on the planter rack at Wan Po Road 3.</li> <li>Chemical was observed not placing on a drip tray at Wan Po Road 2.</li> </ol>	<ol> <li>Gully was protected by sandbags.</li> <li>Construction boundary was protected by sandbags.</li> <li>Construction materials were removed.</li> <li>Chemical was removed.</li> </ol>

- 6.4 According to the EIA Study Report, Environmental Permit, contract documents and EM&A Manual, the mitigation measures detailed in the documents should be implemented as much as practical during the reporting period. An updated Implementation Status of Environmental Mitigation Measures (EMIS) is provided in **Appendix C**.
- 6.5 Site inspection proforma of the reporting period is provided in **Appendix L.**



### 7. FUTURE KEY ISSUES

7.1 Key works that will be anticipated in the next reporting period for the Project are shown in **Table 7.1**.

Table 7.1. Key works for the next reporting month

Location	Location	Forecast Works in Next Reporting Month
Portion H of the Project Site	TKO 137 Pit A	Pipe installation works inside sleeve pipe between Pit 137A to Pit 137C will be conducted.
	TKO 137 Pit B	Pipe installation works inside sleeve pipe between Pit 137A to Pit 137C will be conducted.
	TKO 137 Pit C	Pipe installation works inside sleeve pipe between Pit 137A to Pit 137C will be conducted.
	Wan Po Rd – Workfront 1	<ul> <li>Curtain grouting works for the receiving pit 1 will be conducted.</li> </ul>
	Wan Po Rd – Workfront 2	<ul> <li>Excavation and ELS works for jacking pit</li> <li>2 will be conducted.</li> </ul>
	Wan Po Rd – Workfront 3	<ul> <li>Trench excavation and pipe laying works will be conducted.</li> </ul>
	Wan Po Rd – Workfront 4	<ul> <li>Trench excavation and pipe laying works will be conducted.</li> </ul>
	Wan Po Rd – Pit A	<ul> <li>Remedial works for pit will be conducted.</li> </ul>
	Wan Po Rd – Pit B	<ul> <li>Preparation works for MTBM pipe jacking will be conducted.</li> <li>MTBM pipe jacking will be commenced.</li> </ul>
	Shek Kok Road – Pit D	MTBM pipe jacking will be commenced.
Portion J of the	Shek Kok Road – Hand-shield	Modification works of existing retaining wall will be conducted
Project Site	Landfill Stage 1 – Area A	<ul> <li>Trench excavation and pipe laying works will be conducted.</li> </ul>
	Pet Garden's Road	<ul> <li>Trench excavation and pipe laying works will be conducted.</li> </ul>
	Pung Loi Road – Pit WPR1	<ul> <li>Excavation and ELS works for jacking pit will be conducted.</li> </ul>
	Roundabout – Pit G1A	<ul> <li>Pit excavation and ELS works will be conducted.</li> <li>Receiving pit construction will be completed.</li> </ul>
	Velodrome – Pit K	Pipe installation works inside sleeve pipe between Pit K to Pit L will be conducted.
	Velodrome – Pit M	Pipe installation inside sleeve pipe between Pit M1 to Pit M2 will be conducted.



Location	Location	Forecast Works in Next Reporting Month
	Velodrome – Pit O to Pit N	Trench excavation works will be conducted.
	Velodrome – Pit O to Pit P	Site setup works for trenchless works will be conducted.
	Velodrome – Pit P	TBM pipe jacking will be continued.
	Mau Wu Tsai – Workfront 1	Trench excavation and pipe laying works will be conducted.
	Mau Wu Tsai – Workfront 2	Trench excavation and pipe laying works will be conducted.
	Po Lam Road South	Trench excavation and pipe laying works will be conducted.
	Po Lam Road (D2)	Trench excavation and pipe laying works will be conducted.
	Po Lam Road (C2)	Pre-drilling works for mini piling of pipe bridge at Location A westside slope will be conducted.
	Po Lam Road (B4)	Trench rock breaking works will be conducted.
		Trench excavation and pipe laying works will be conducted.
	Tsui Lam Road	Bamboo platform erection works will be continued.
	TKO Primary Service Reservoir	Trench excavation and pipe laying works will be conducted.

- 7.2 The major environmental impacts brought by the above construction works will include:
  - Construction dust and noise generation of saw cutting of concrete surface, mainlaying of pipes, drilling activities, TBM break through, sheetpiling works and excavation works.
  - Waste generation from construction activities
  - Impact on water quality from construction activities
- 7.3 The key environmental mitigation measures for the Project in the coming reporting period associated with the above construction works will include:
  - Dust suppression by regular wetting and water spraying for saw cutting of concrete surface, mainlaying of pipes, drilling activities, TBM break through, sheetpiling works and excavation works.
  - Reduction of noise from equipment and machinery on-site
  - Sorting and storage of general refuse and construction waste
  - Treatment of wastewater with water treatment facilities before discharge
- 7.4 The proactive environmental protection proforma for the next reporting month is listed in **Appendix M.**



- 7.5 Referring to EM&A Manual Section 4.1.2, the impact noise monitoring should be carried out at all the designated monitoring stations when there are project-related construction activities undertaken within a radius of 300m from the monitoring stations.
- 7.6 The tentative impact monitoring schedule for the next reporting month is attached in **Appendix N**.

### 8. CONCLUSION AND RECOMMENDATIONS

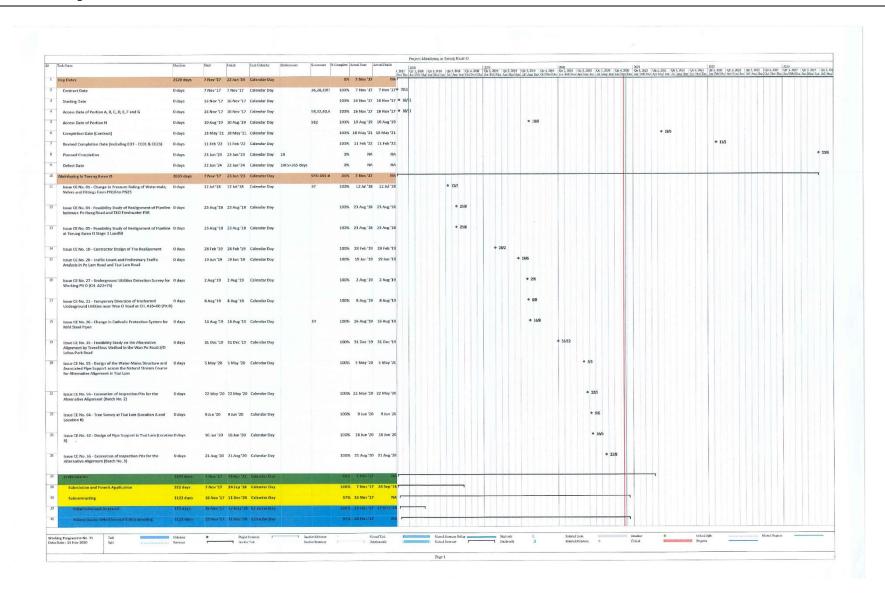
- This is the 41<sup>th</sup> monthly Environmental Monitoring and Audit (EM&A) Report presenting the EM&A works undertaken during the period from 1 December 2021 to 31 December 2021, in accordance with the EM&A Manual and the requirement under EP-503/2015/A.
- 8.2 Impact monitoring for noise impact was scheduled in the reporting month for NSR4 Creative Secondary School on 1, 8, 17, 21 and 31 December 2021 as construction works were conducted within 300m to the noise sensitive receiver. Detailed monitoring results can be found in **Appendix G**.
- 8.3 No examinations were scheduled in the reporting month for NSR4 Creative Secondary School. Academic School Calendar can be found in **Appendix O**.
- 8.4 No project-related exceedance of the Action Level was recorded during the reporting period.
- 8.5 Weekly environmental site inspection was conducted during the reporting period. Minor deficiencies were observed during site inspection and were rectified. The environmental performance of the project was therefore considered satisfactory.
- 8.6 According to the environmental site inspections performed in the reporting month, the contractor is reminded to pay attention on maintaining site tidiness, water treatment facilities, dust suppression mitigations and proper materials storage.
- 8.7 No project-related environmental complaint was received in the reporting month.
- 8.8 No notification of summons or prosecution was received since the commencement of the Contract.
- 8.9 The ET will keep track on the construction works to confirm compliance of environmental requirements and the proper implementation of all necessary mitigation measures.



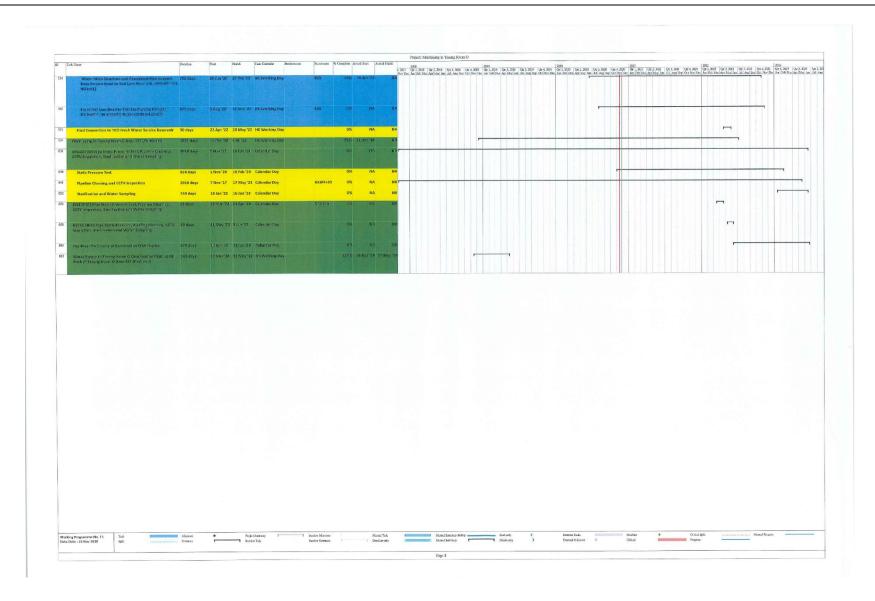
# Appendix A

**Construction Programme** 

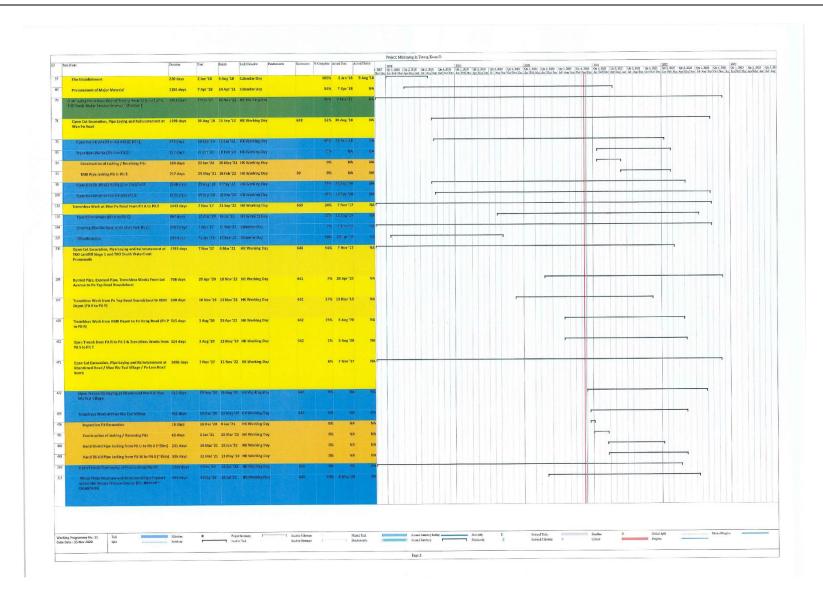




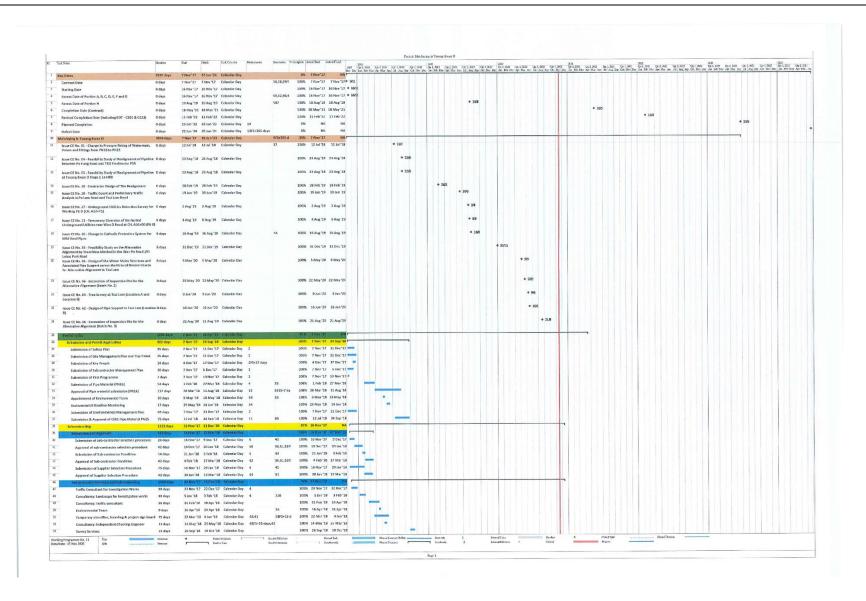




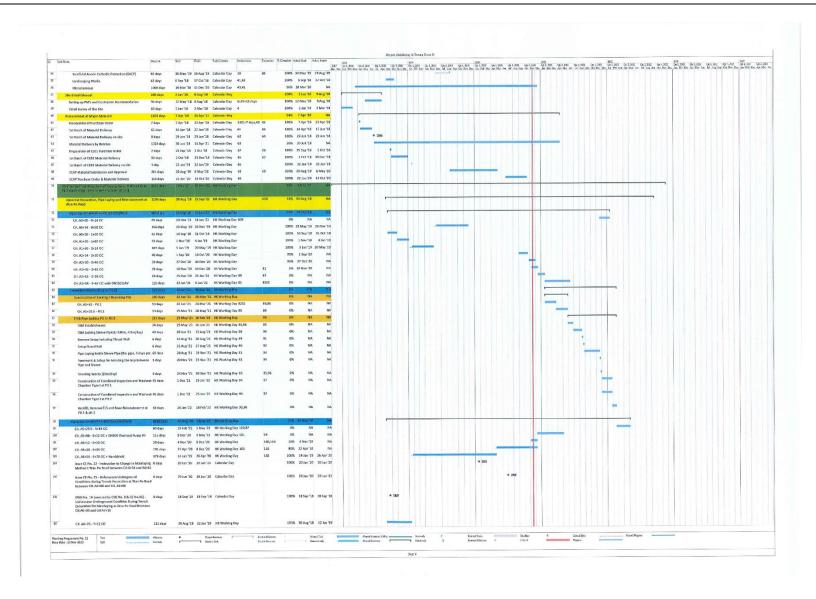




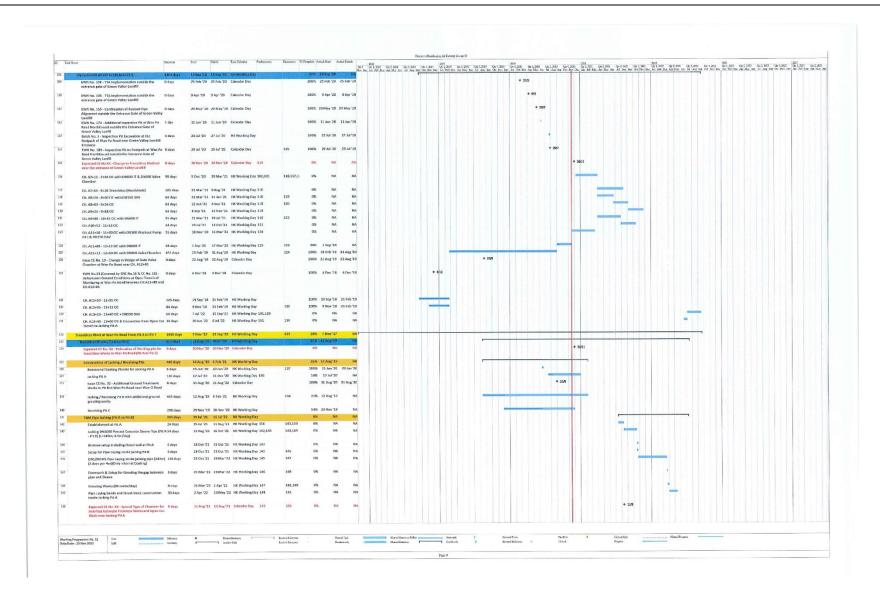




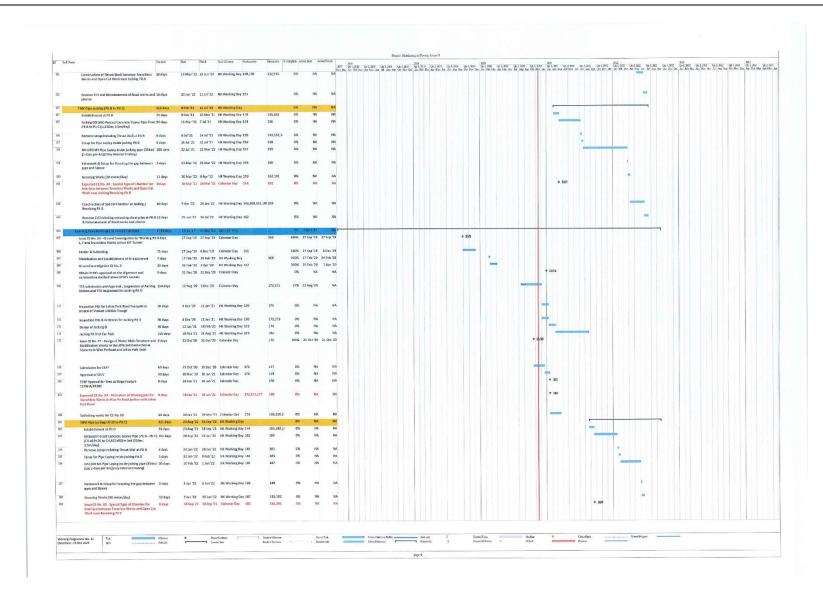




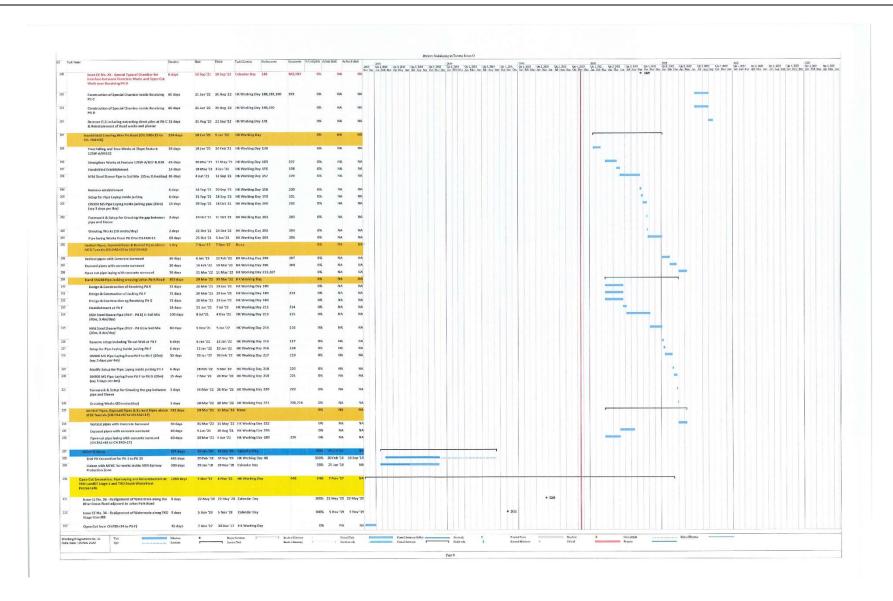




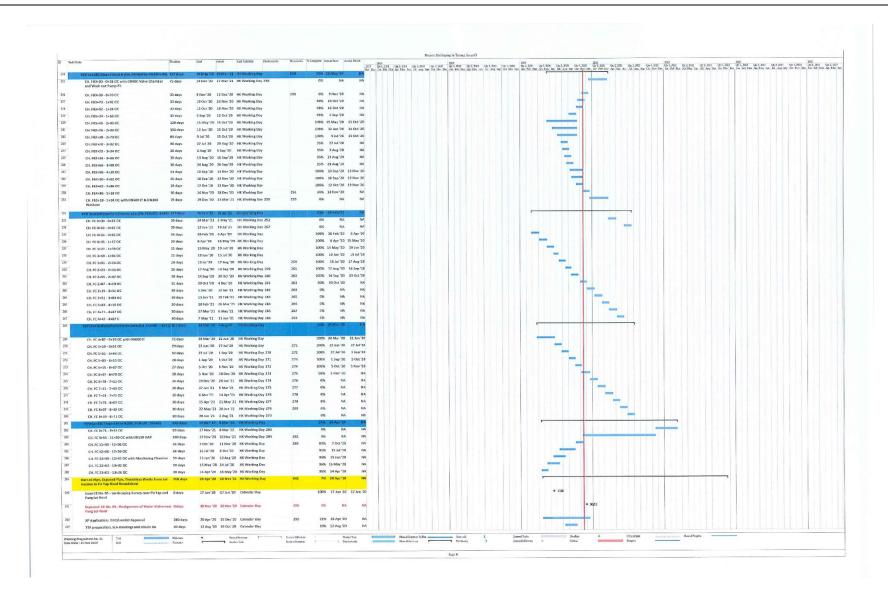




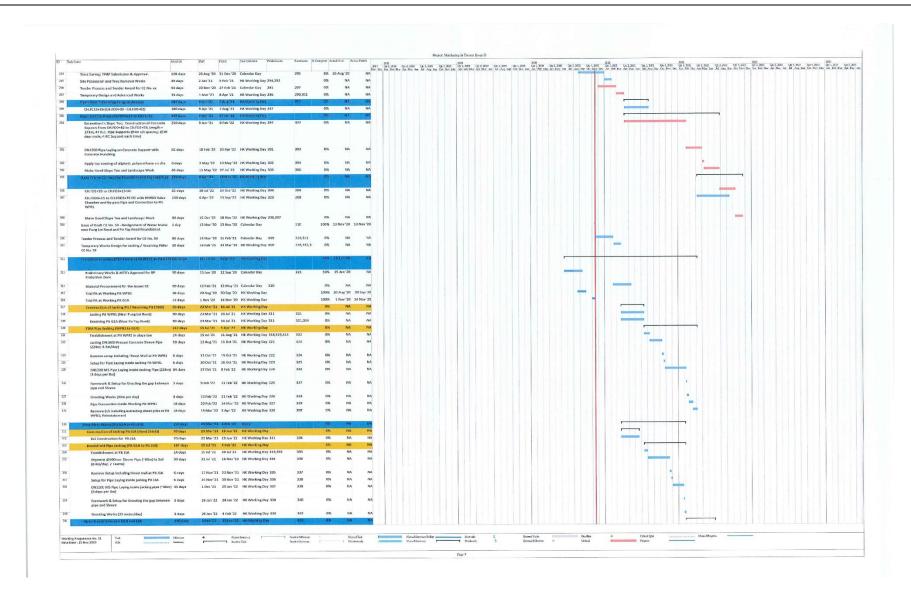




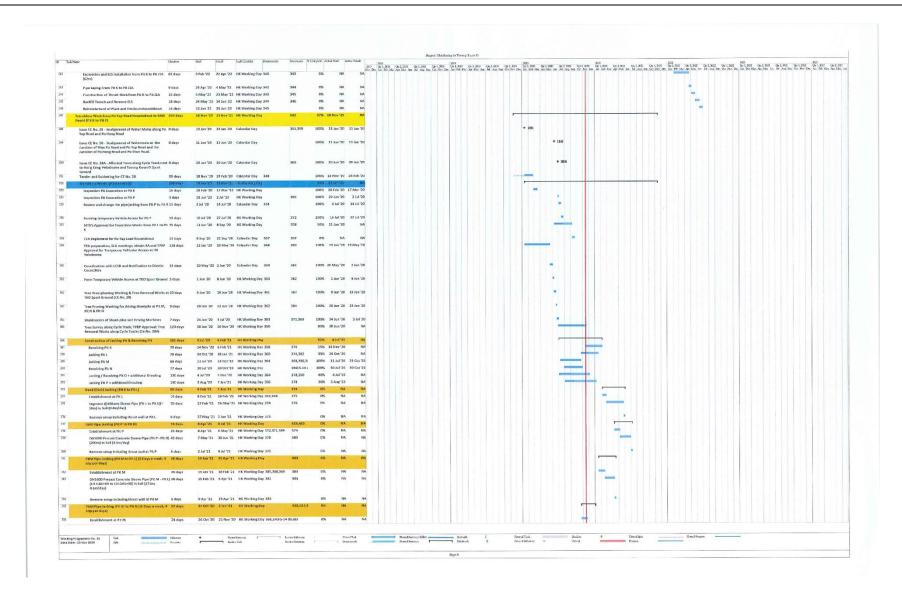




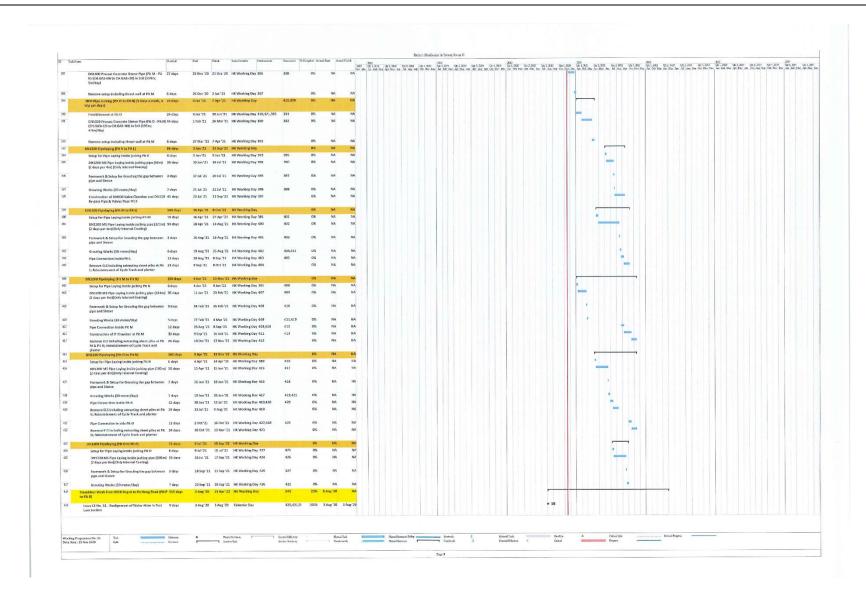




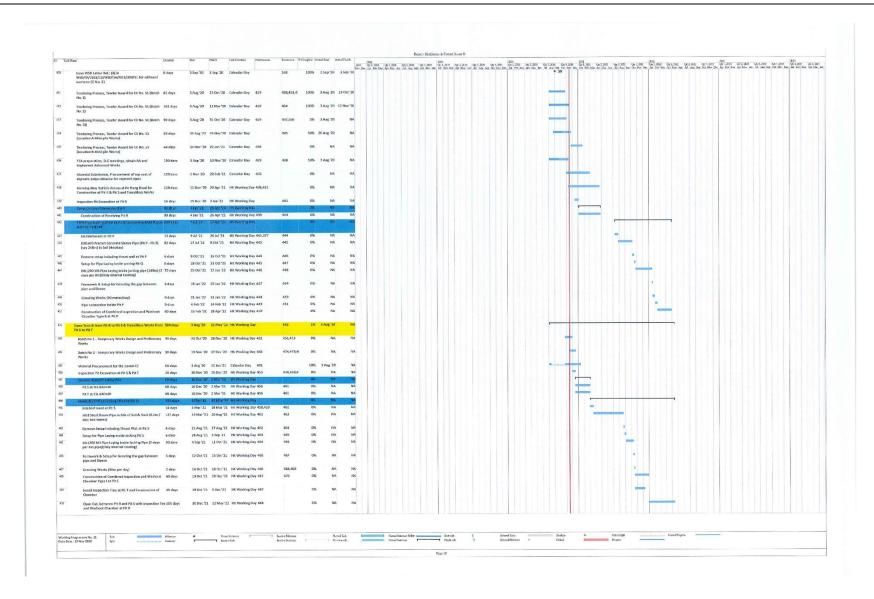




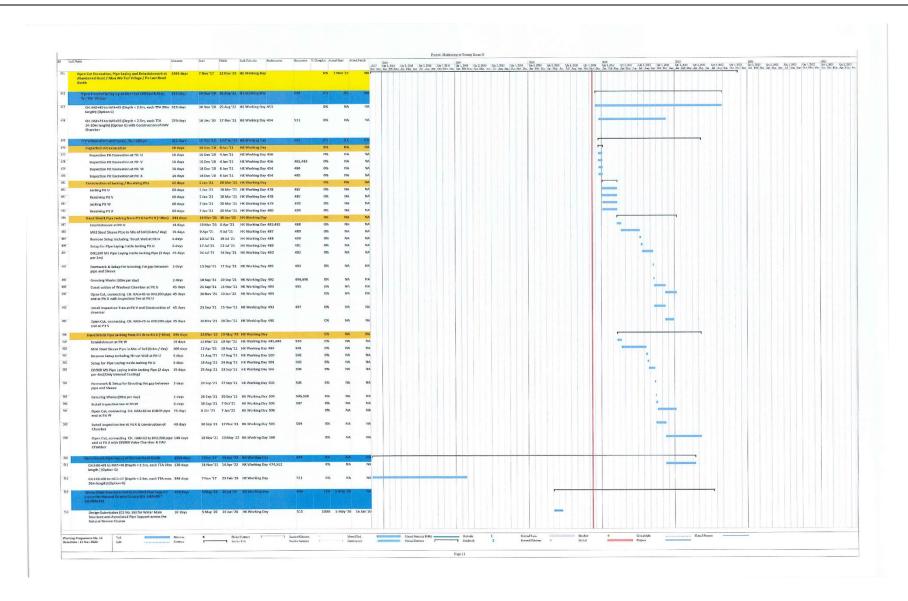




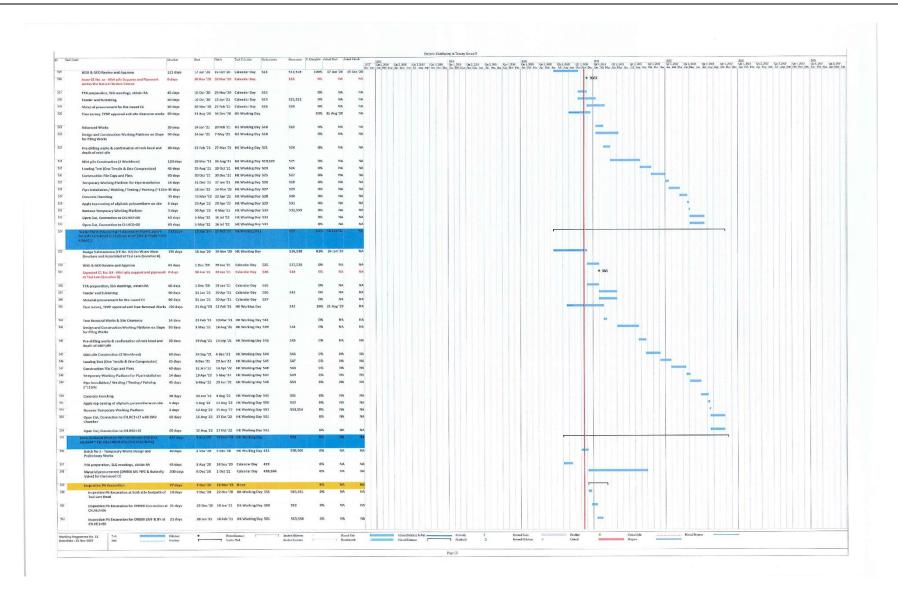




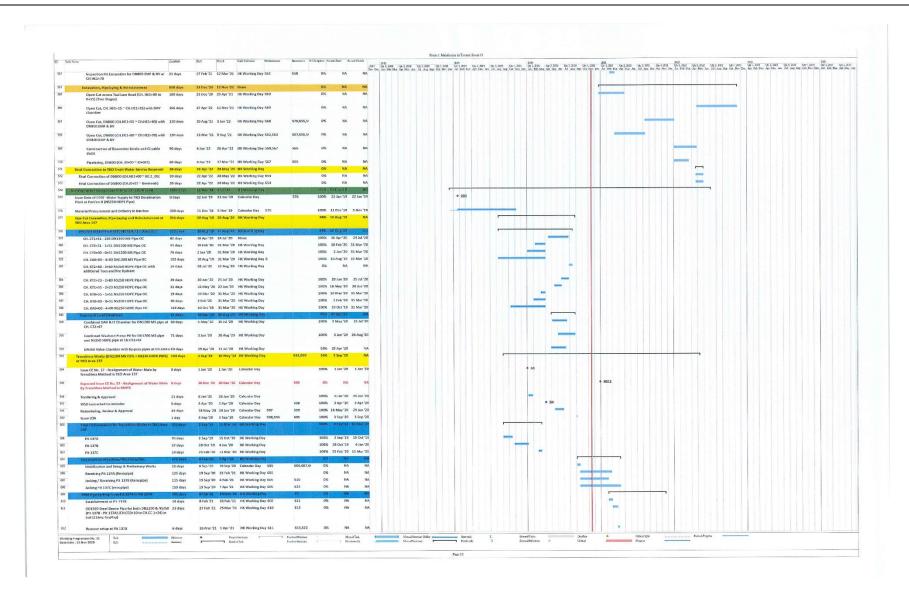




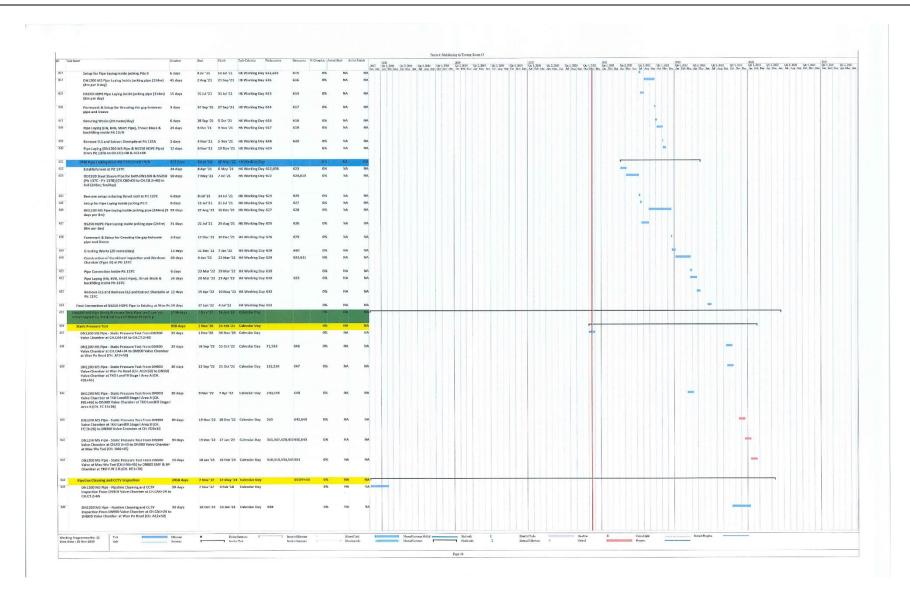




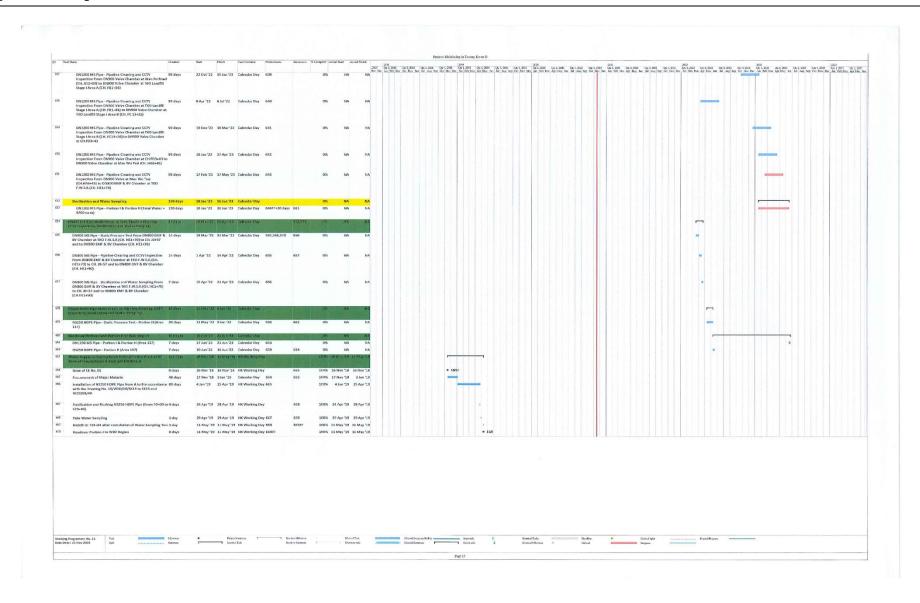














# Appendix B

Overview of Mainlaying in Tseung Kwan O



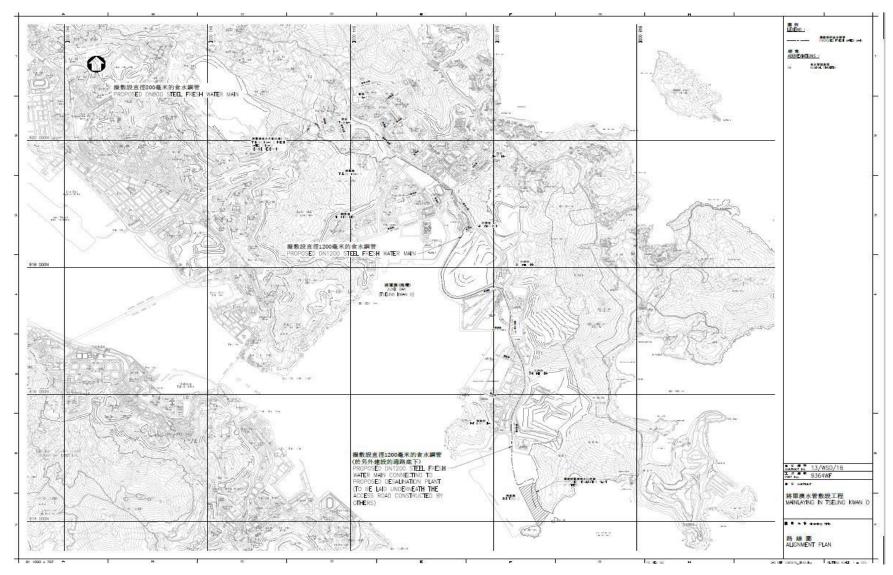


Figure B1. Overview of Mainlaying in TKO



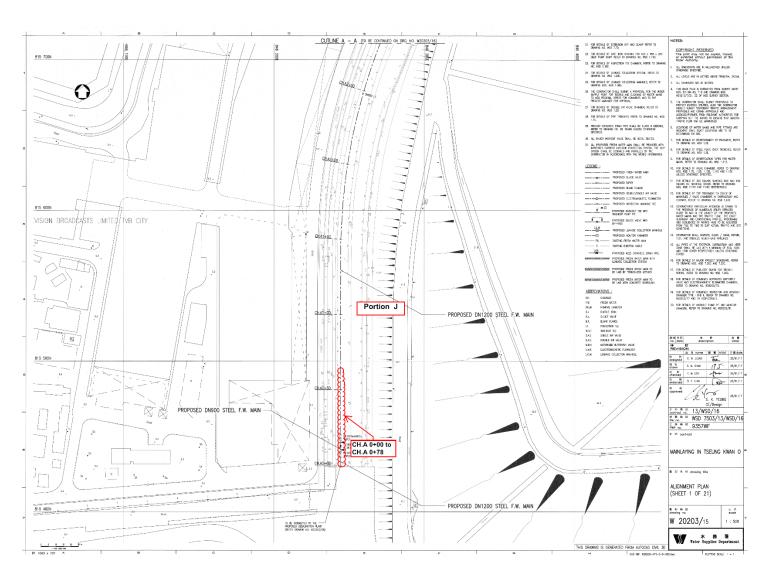


Figure B2. Location Plan for Portion J - CH.A 0+00 to CH.A 0+78



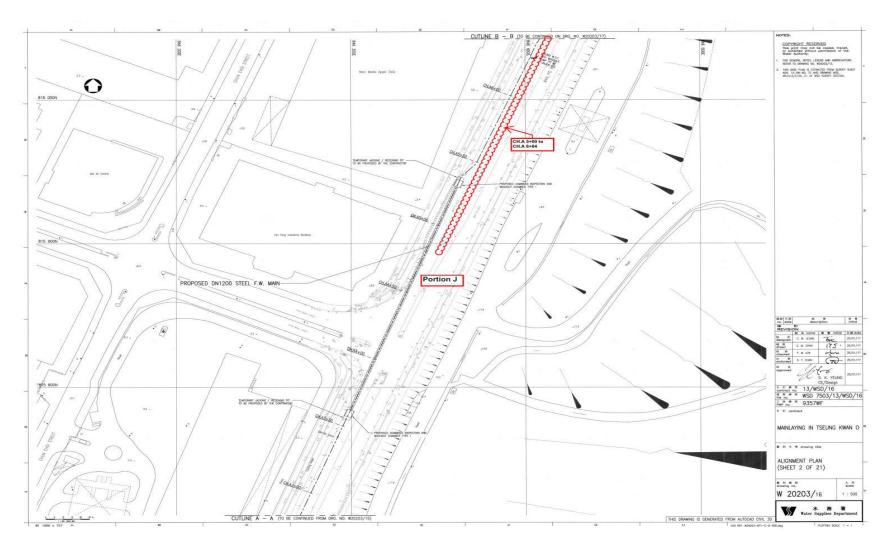


Figure B3a. Location Plan for Portion J - CH.A 5+00 to CH.A 6+64



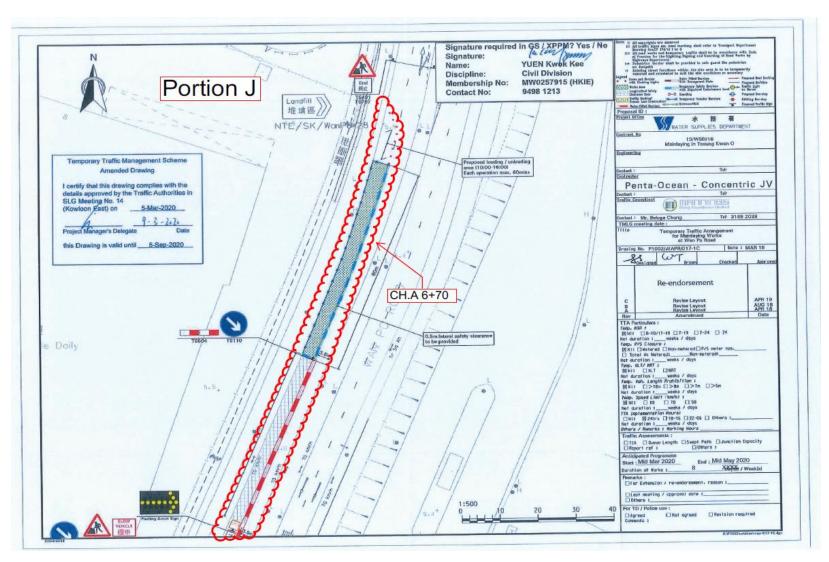


Figure B3b(i). Location Plan for Portion J - CH.A 6+70



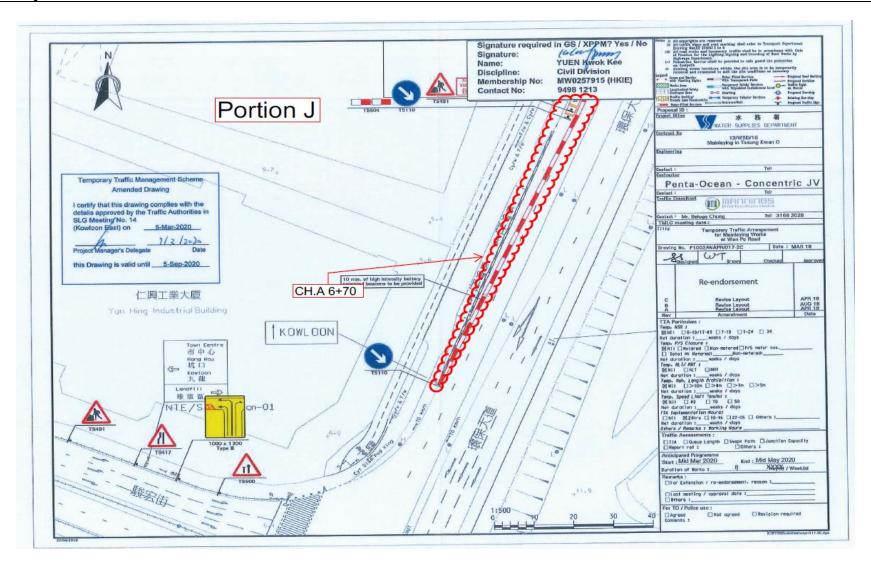


Figure B3b(ii). Location Plan for Portion J - CH.A 6+70



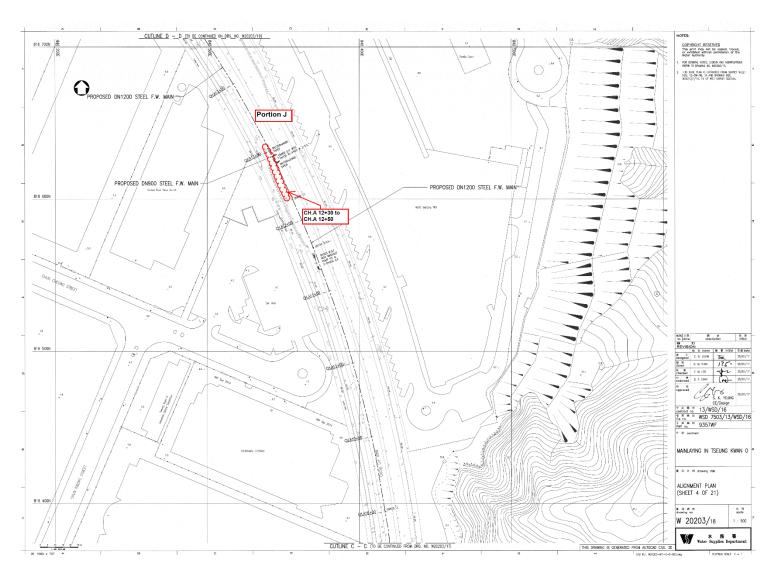


Figure B4. Location Plan for Portion J - CH.A 12+30 to CH.A 12+50



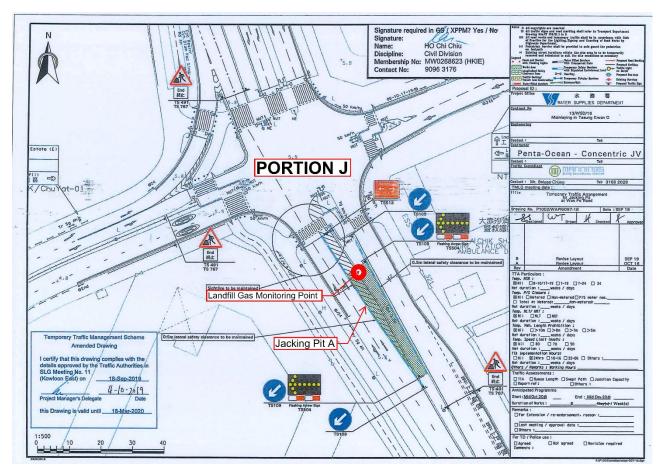


Figure B5. Location Plan for Portion J – CH. A13+50 to CH.A 14+00 (Pit A)



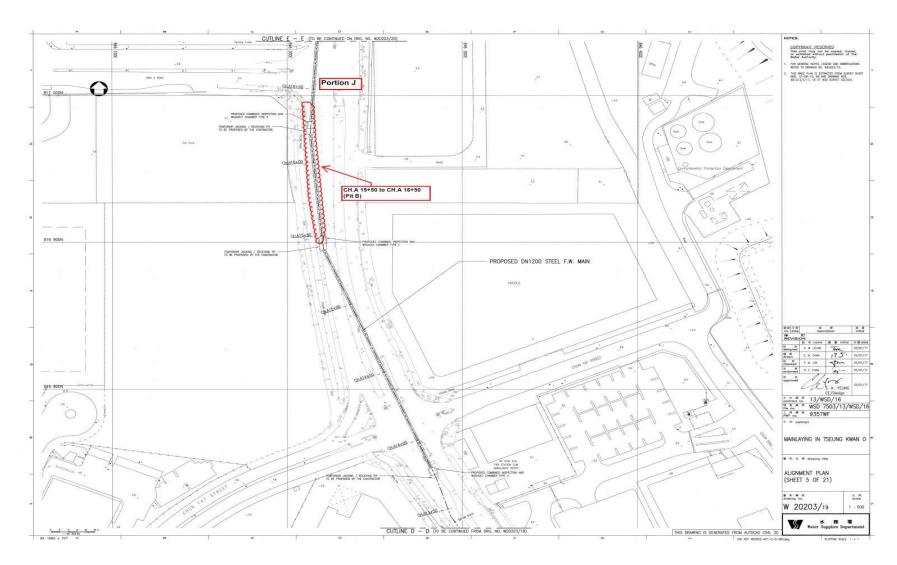


Figure B6. Location Plan for Portion J – CH. A15+50 to CH.A 16+50 (Pit B)



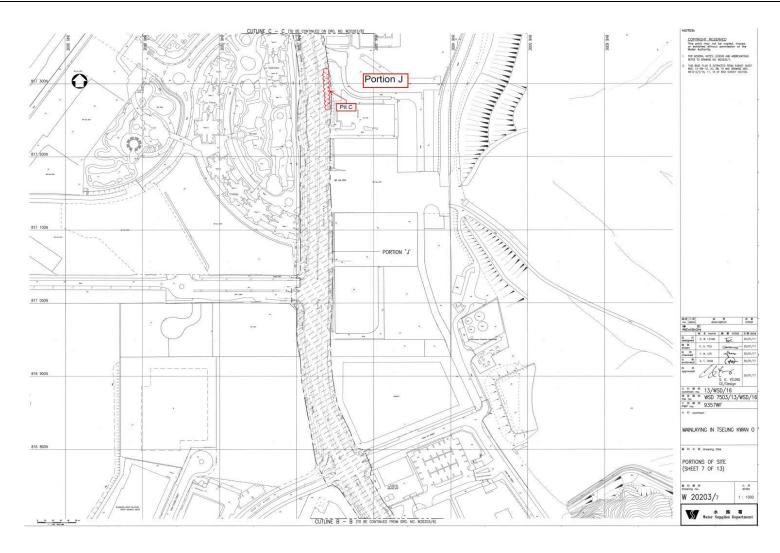


Figure B7. Location Plan for Portion J – CH.A 19+15 to CH.A 19+50 (Pit C)



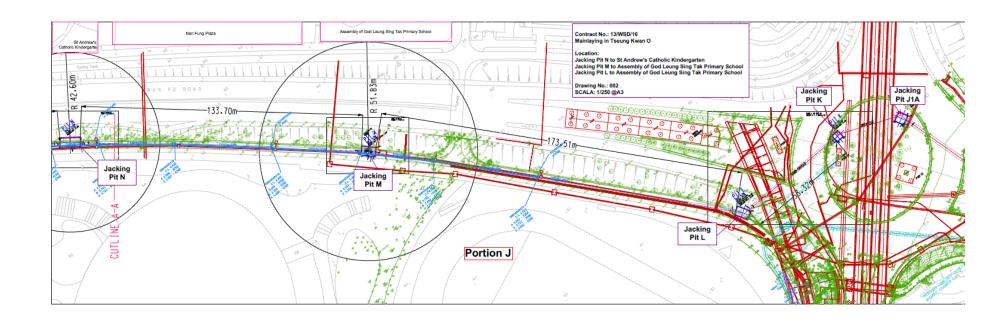


Figure B8a. Location Plan for Portion J – Pit L-M-N, K, J1A



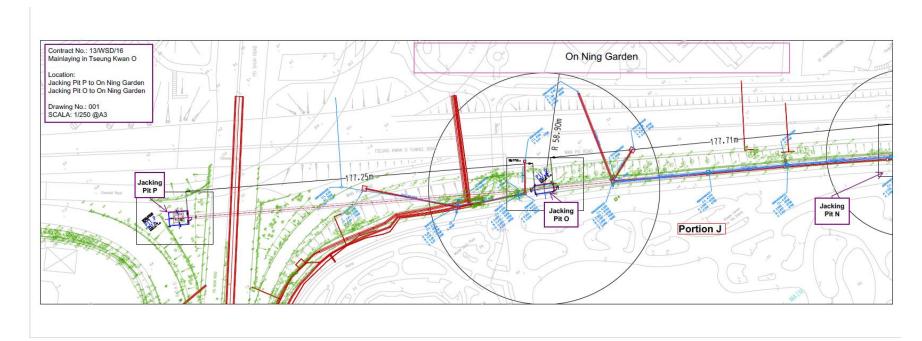


Figure B8b. Location Plan for Portion J – Pit N-O-P



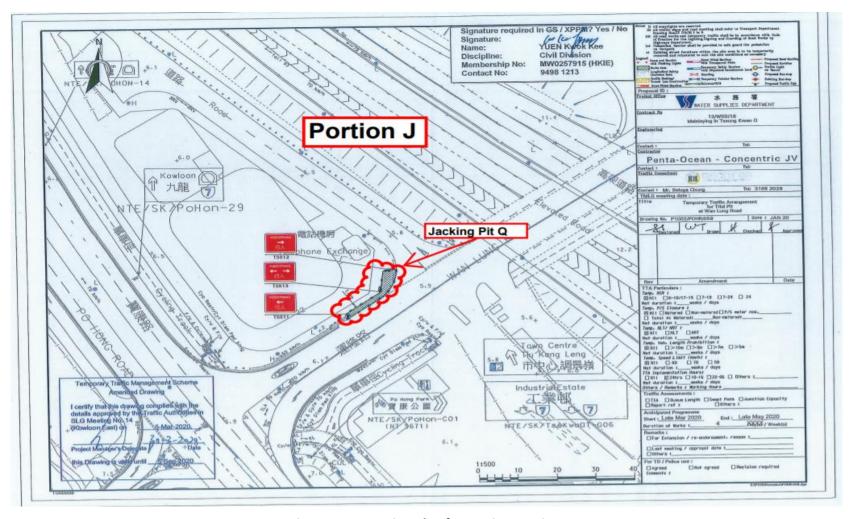


Figure B8c. Location Plan for Portion J – Pit Q



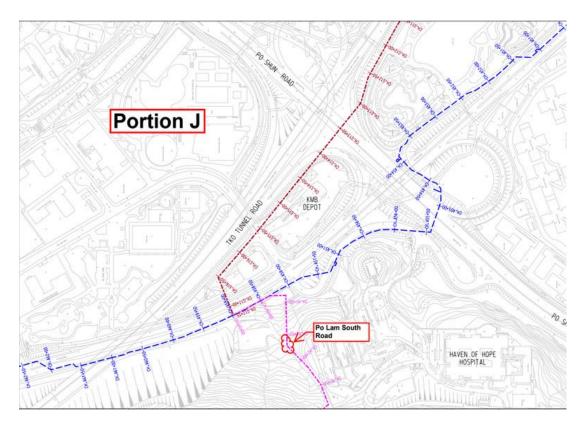


Figure B9a. Location Plan for Mau Wu Tsai 1

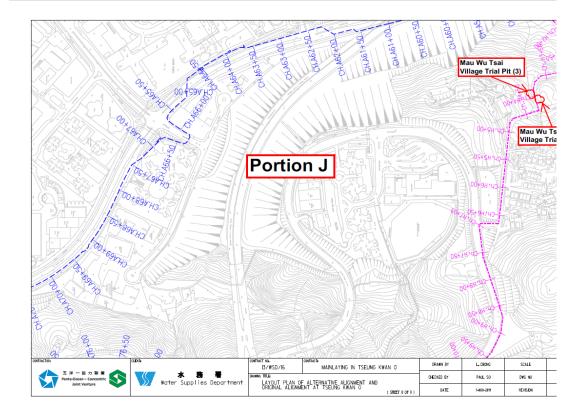


Figure B9b. Location Plan for Mau Wu Tsai 2 & 3



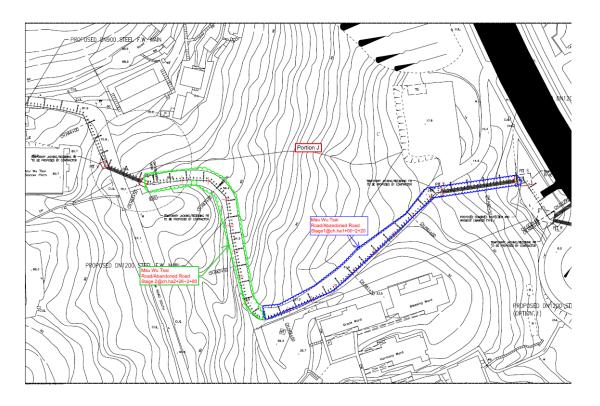


Figure B9c. Abandoned Mau Wu Tsai Road

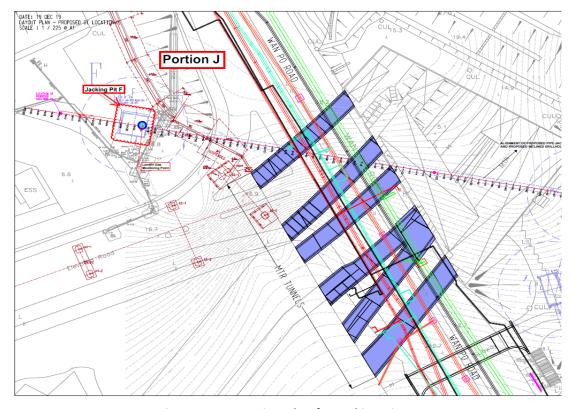


Figure B10. Location Plan for Jacking Pit F



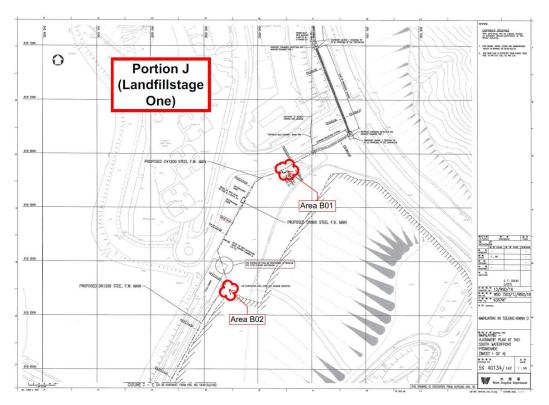


Figure B11a. Location Plan - Landfill Stage 1 (Area B01-B02)

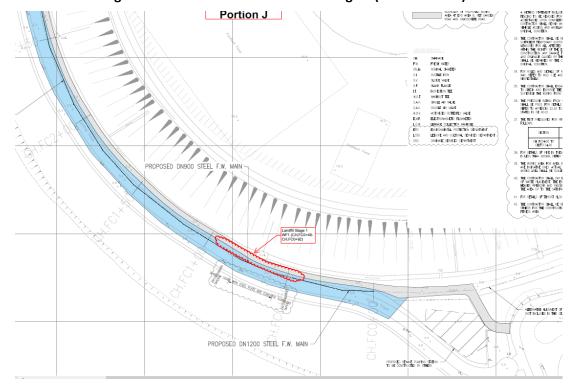


Figure B11b. Location Plan - Landfill Stage 1 (Area FC0+42 -FC0+92)



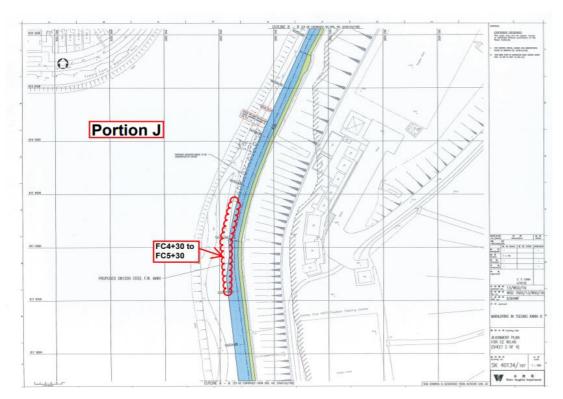


Figure B11c. Location Plan - Landfill Stage 1 (Area FC4+30 -FC5+30)

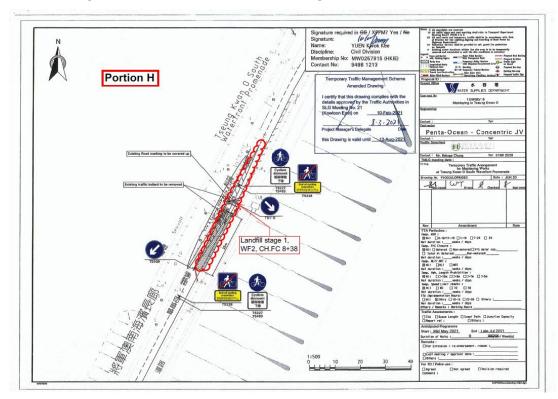


Figure B11d. Location Plan – Landfill Stage 1 (Area FC8+38)



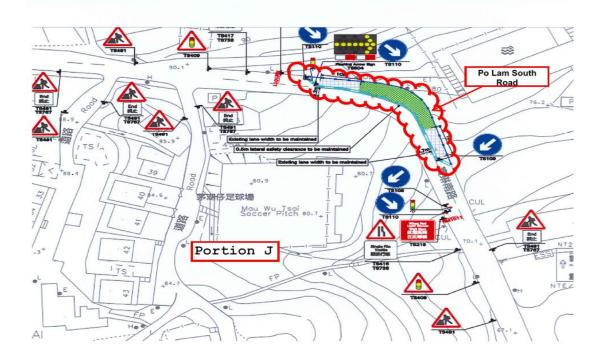


Figure B12. Monitoring Location – Po Lam South Road

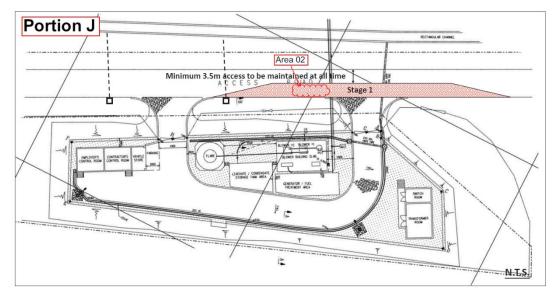


Figure B13. Monitoring Location – Area A02



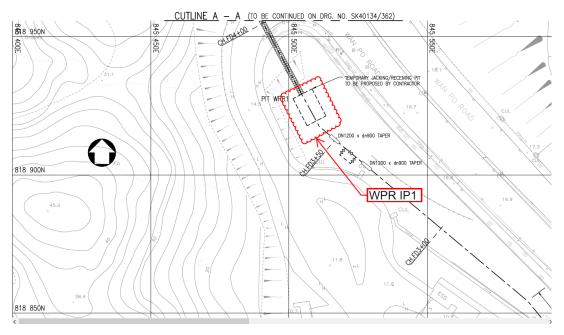


Figure B14. Location Plan for WPR IP1

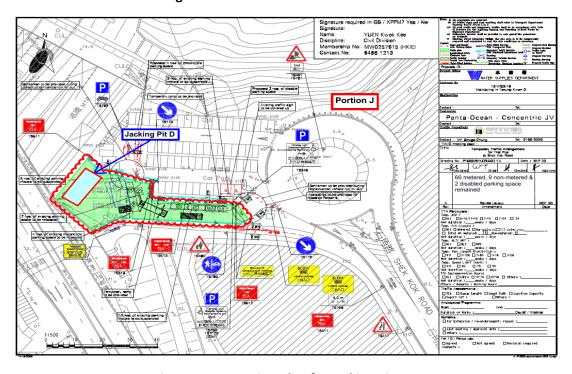


Figure B15. Location Plan for Jacking Pit D



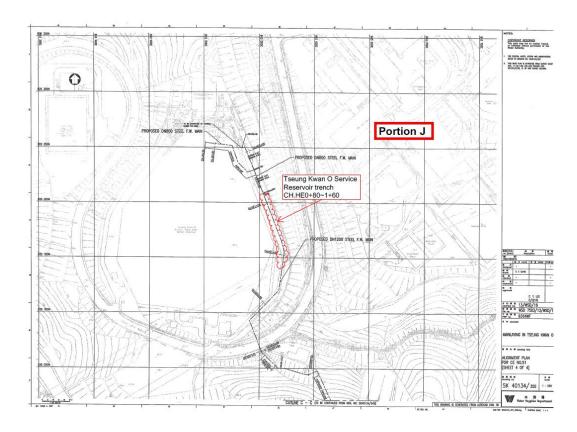


Figure B16. Location Plan for CH.HE0+80-1+60

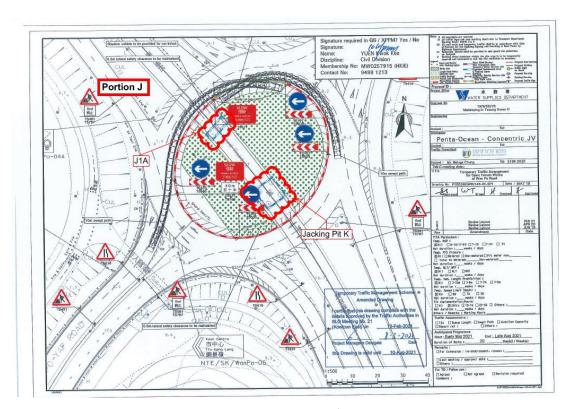


Figure B17. Location Plan for Pit K



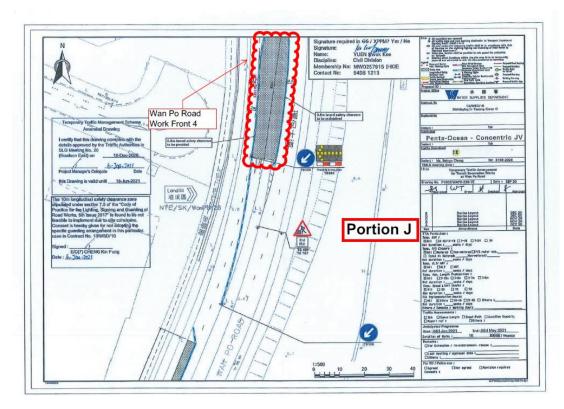


Figure B18a. Location Plan for Wan Po Road 4

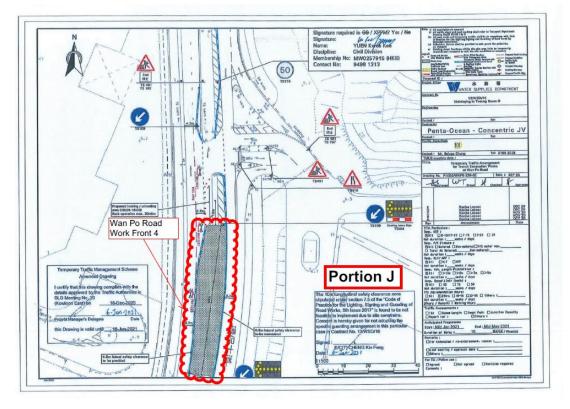


Figure B18b. Location Plan for Wan Po Road 4



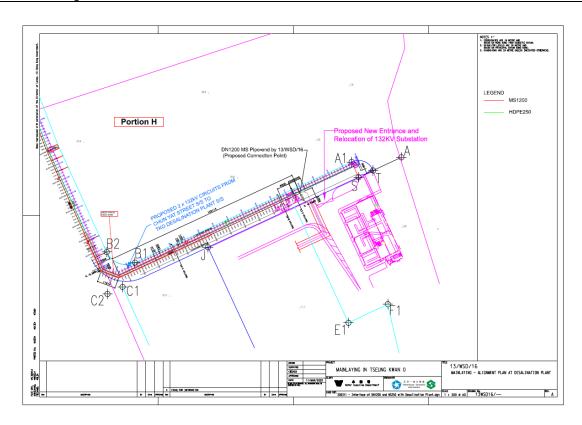


Figure B19a. Location Plan for CH.CT 0+07 - 2+58

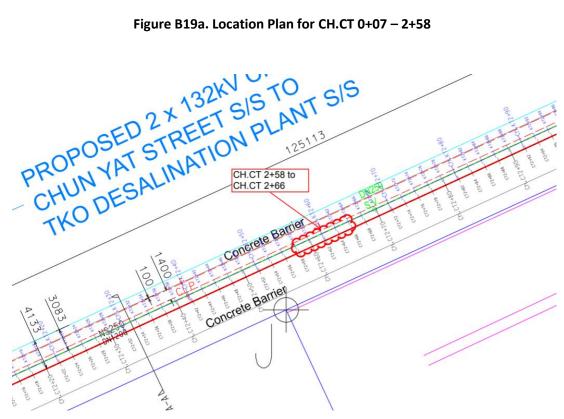


Figure B19b. Location Plan for CH.CT 2+58 - 2+66



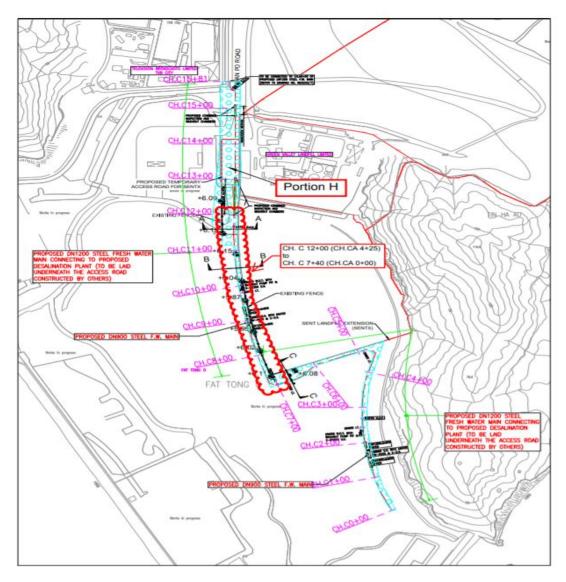


Figure B20. Location Plan for Portion H– CH.C 7+40 $^{\sim}$ CH.C 12+00 (CH.CA 0+00  $^{\sim}$  CH.CA4+25)



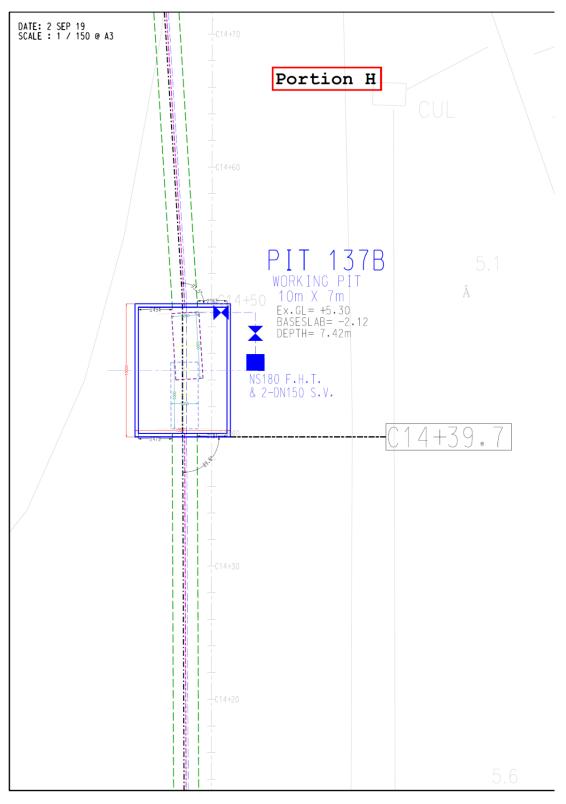


Figure B21a. Location Plan for Portion H- Pit 137B



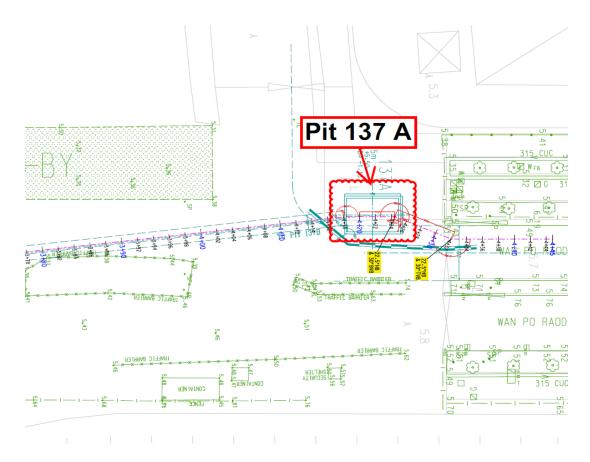


Figure B21b. Location Plan for Portion H- Pit 137A

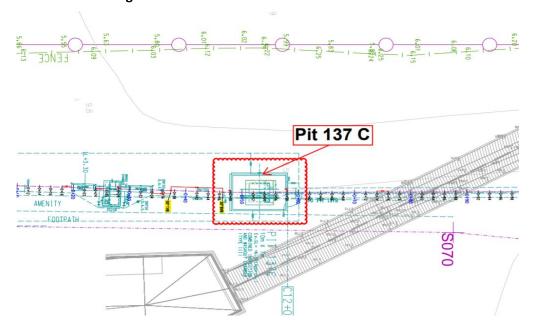


Figure B21c. Location Plan for Portion H- Pit 137C



# Appendix C

Summary of Implementation Status of Environmental Mitigation



EIA Reference	Recommended Environmental Protection Measures/	Objectives of the recommended measures &	Implementation	Implem	entatio	n Stage	implementation	Relevant Legislation & Guidelines
	Mitigation Measures	main concerns to address	Agent	D	С	0	status	
Air Quality								
S4.8.1	Impervious dust screen or sheeting will be provided to enclose scaffolding from the ground floor level of building for construction of superstructure of the new buildings.	Land site/ During Construction	Contractor(s)		<b>~</b>		N/A	Air Pollution Control (Construction Dust)
S4.8.1	Impervious sheet will be provided for skip hoist for material transport.	Land site/ During Construction, particularly dry season	Contractor(s)		✓		N/A	
S4.8.1	The area where dusty work takes place should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after dusty activities as far as practicable.	Land site/ During Construction	Contractor(s)		<b>✓</b>		Implemented	
S4.8.1	All dusty materials should be sprayed with water or a dust suppression chemical immediately prior to any loading, unloading or transfer operation.	Land site/ During Construction	Contractor(s)		✓		Implemented	
S4.8.1	Dropping heights for excavated materials should be controlled to a practical height to minimize the fugitive dust arising from unloading.	Land site/ During Construction	Contractor(s)		✓		Implemented	
S4.8.1	During transportation by truck, materials should not be loaded to a level higher than the side and tail boards, and should be dampened or covered before transport.	Land site/ During Construction	Contractor(s)		<b>✓</b>		Implemented	
\$4.8.1	Wheel washing device should be provided at the exits of the work sites. Immediately before leaving a construction site, every vehicle shall be washed to remove any dusty material from its body and wheels as far as practicable.	Land site/ During Construction	Contractor(s)		<b>√</b>		N/A	



EIA Reference	Recommended Environmental Protection Measures/	Objectives of the recommended measures &	Implementation	Implen	nentatio	n Stage	Implementation	Relevant Legislation & Guidelines
EIA Reference	Mitigation Measures	main concerns to address	Agent	D	С	0	status	
S4.8.1	Road sections between vehicle-wash areas and vehicular entrance will be paved.	Land site/ During Construction	Contractor(s)		✓		N/A	
S4.8.1	Hoarding of not less than 2.4m high from ground level will be provided along the length of the Project Site boundary.	Land site/ During construction	Contractor(s)	<b>✓</b>	<b>√</b>		N/A	
S4.8.1	Haul roads will be kept clear of dusty materials and will be sprayed with water so as to maintain the entire road surface wet at all times.	Land site/ During construction	Contractor(s)		<b>V</b>		Implemented.	
S4.8.1	Temporary stockpiles of dusty materials will be either covered entirely by impervious sheets or sprayed with water to maintain the entire surface wet all the time.	Land site/ During construction	Contractor(s)		<b>V</b>		Reminder and observation issued. Rectified after observation.	
S4.8.1	Stockpiles of more than 20 bags of cement, dry pulverised fuel ash and dusty construction materials will be covered entirely by impervious sheeting sheltered on top and 3-sides.	Land site/ During construction	Contractor(s)		<b>✓</b>		Reminder and observation issued. Rectified after observation.	
S4.8.1	All exposed areas will be kept wet always to minimise dust emission.	Land site/ During construction	Contractor(s)		<b>√</b>		Implemented.	
S4.8.1	Ultra-low-sulphur diesel (ULSD) will be used for all construction plant on-site, as defined as diesel fuel containing not more than 0.005% sulphur by weight) as stipulated in Environment, Transport and Works Bureau Technical Circular (ETWB-TC(W)) No 19/2005 on Environmental Management on Construction Sites.	Land site/ During construction/ During Operation	Contractor(s)		<b>✓</b>	•	Implemented	Environment, Transport and Works Bureau Technical Circular (ETWB- TC(W)) No 19/2005 on Environmental Management on Construction Sites



EIA Reference	Recommended Environmental Protection Measures/	Objectives of the recommended measures &	Implementation	Implem	entatio	n Stage	Implementation	Relevant Legislation & Guidelines
EIA Reference	Mitigation Measures	main concerns to address	Agent	D C O status  Implemented  N/A  Implemented  Implemented				
\$4.8.1	The engine of the construction equipment during idling will be switched off.	Land site/ During construction	Contractor(s)		<b>*</b>		Implemented	
S4.8.1	Concrete batching plant will be required on site. control measures recommended in the Guidance Note on a Best Practicable Means for Cement Works (Concrete Batching Plant) (BPM 3/2 (93)) will be implemented. The control measures recommended in the Guidance Note on a Best Practicable Means for Cement Works (Concrete Batching Plant) (BPM 3/2 (93)) will be implemented.	Land site/ During construction	Contractor(s)		<b>✓</b>		N/A	Guidance Note on a Best
S4.8.1	Regular maintenance of construction equipment deployed on-site will be conducted to prevent black smoke emission.	Land site/ During construction	Contractor(s)		<b>✓</b>		Implemented	
S4.10	To ensure proper implementation of the recommended dust mitigation measures and good construction site practices during the construction phase, environmental site audits on weekly basis is recommended throughout the construction period.	Land site/ During construction	Contractor(s)/ Environmental Team (ET) & Independent Environmental Checker (IEC)		~		Implemented	



EIA Reference	Recommended Environmental Protection Measures/	Objectives of the recommended measures & main concerns to	Implementation	Implem Stage	entatio	n	Implementation status	Relevant Legislation &
	Mitigation Measures	address	Agent	D	С	0		Guidelines
Noise								
\$5.7	Only well-maintained plant will be operated on-site and plant will be serviced regularly during the construction phase.	All area/ During construction	Contractor(s)		<b>✓</b>		Implemented	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Silencers or mufflers on construction equipment will be utilised and will be properly maintained during the construction phase.	Noise control/ During construction	Contractor(s)		<b>✓</b>		N/A	A Practical Guide for the Reduction of Noise from Construction Works,
\$5.7	Mobile plant, if any, will be sited as far away from NSRs as possible.	Noise control/ During construction	Contractor(s)		<b>✓</b>		Implemented	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Machines and plant (such as trucks) that may be in intermittent use will be shut down between work periods or will be throttled down to a minimum.	Noise control/ During construction	Contractor(s)		<b>✓</b>		Implemented	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Plants known to emit noise strongly in one direction will, wherever possible, be orientated so that the noise is directed away from the nearby NSRs.	Noise control/ During construction	Contractor(s)		<b>*</b>		Implemented	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Material stockpiles and other structures will be effectively utilised, wherever practicable, in screening noise from on-site construction activities.	Noise control/ During construction	Contractor(s)		<b>*</b>		N/A	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Use of Quite Powered Mechanical Equipment (QPME).	Noise control/ During construction	Contractor(s)		<b>√</b>		Implemented	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Movable noise barriers of 3m in height with skid footing should be used and located within a few metres of stationary plant and mobile plant such that the line of sight to the NSR is blocked by the barriers. The length of the barrier should be at least five times greater than its height. The noise barrier material should have a superficial surface density of at least 7 kg m <sup>-2</sup> and have no openings or gaps.	Noise control/ During construction	Contractor(s)		<b>√</b>		N/A	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	The noise insulating sheet should be deployed such that there would be no opening or gaps on the joints.	Noise control/ During construction	Contractor(s)		✓		N/A	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Construction activities (e.g. excavation/shoring, reinstatement (asphalt), and pipe jacking) will be planned and carried out in sequence, such that items of	Noise control/ During construction	Contractor(s)		<b>*</b>		Implemented	A Practical Guide for the Reduction of Noise from Construction Works



EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to	Implementation	Implen Stage	nentatio	n	Implementation status	Relevant Legislation & Guidelines
		address	Agent	D	С	0		Guidelines
	PME proposed for these activities will not be operated							
	simultaneously.							
\$5.7	PMEs will not be used at the works areas near educational institutions with residual impact (ie the "influence area" within a radius of 40m) during school hours in order to reduce impact to the educational institutions.	Noise control / During construction	Contractor(s)		•		Implemented	A Practical Guide for the Reduction of Noise from Construction Works
\$5.7	Noise enclosures or acoustic sheds would be used to cover stationary PME such as generators.  Portable/Movable noise enclosure made of material with superficial surface density of at least 7 kg m <sup>-2</sup> may be used for screening the noise from operation of the saw/groover, concrete.	Noise control/ Pre- construction/ During construction	Contractor(s)		<b>√</b>		N/A	
S5.9	Sawcutting pavement, breaking up of pavement, excavation /shoring, pipe laying, backfilling, reinstatement (concrete) and pipe jacking shall be scheduled outside the examination period.	Noise control/ Pre- construction/ During construction	Contractor(s)	<b>✓</b>	<b>✓</b>		Implemented	
S5.9	In view the duration of noise exceedance at Creative Secondary School, PLK Laws Foundation College, TKO Kei Tak Primary School and School of Continuing and Professional Studies-CUHK is limited to 8 weeks, the construction work in the influence areas near the four schools shall be scheduled during long school holidays (eg summer holiday, Easter holiday or Christmas holiday, etc) as far as practicable. Scheduling the construction work for the four schools.	Noise control/ Pre- construction/ During construction	Contractor(s)	<b>✓</b>	•		Implemented	
\$5.10	A noise monitoring programme shall be implemented for the construction phase.	Designated monitoring stations as defined in EM&A Manual/During construction phase	Environmental Team (ET)		<b>✓</b>		Implemented	
\$5.10	The effectiveness of on-site control measures could also be evaluated through the regular site audits.	All facilities/ During construction	Contractor(s)/ Environmental Team (ET) & Independent Environmental Checker (IEC)		<b>✓</b>		Implemented	-



EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to	Implementatio n Agent	Implem Stage	entatio	n	Implementation status	Relevant Legislation & Guidelines
	iviligation ivicasures	address	II Ageilt	D	С	0		Guidennes
Water Quality						•		
S6.9	Dredged marine sediment will be disposed of in a gazetted marine disposal area in accordance with marine dumping permit conditions of the Dumping at Sea Ordinance (DASO).	Marine Dredging/ During construction	Contractor(s)		✓		N/A	Dumping at Sea Ordinance (DASO)
\$6.9	Disposal vessels will be fitted with tight bottom seals in order to prevent leakage of material during transport.	Marine Dredging/ During construction	Contractor(s)		<b>√</b>		N/A	-
\$6.9	Barges will be filled to a level, which ensures that material does not spill over during transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action.	Marine Dredging/ During construction	Contractor(s)		✓		N/A	-
S6.9	After dredging, any excess materials will be cleaned from decks and exposed fittings before the vessel is moved from the dredging area.	Marine Dredging/ During construction	Contractor(s)		<b>√</b>		N/A	-
S6.9	All vessels should be well maintained and inspected before use to limit any potential discharges to the marine environment.	Marine Dredging/ During construction	Contractor(s)		✓		N/A	-
S6.9	All vessels must have a clean ballast system.	Marine Dredging/ During construction	Contractor(s)		✓		N/A	-
S6.9	No discharge of sewage/grey wastewater should be allowed. Waste water from potentially contaminated area on working vessels should be minimized and collected. These kinds of wastewater should be brought back to port and discharged at appropriate collection and treatment system.	Marine Dredging/ During construction	Contractor(s)		<b>✓</b>		N/A	-
S6.9	No soil waste is allowed to be disposed overboard.	Marine Dredging/ During construction	Contractor(s)		✓		N/A	-



EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to	Implementatio n Agent	Implem Stage	entatio	n	Implementation status	Relevant Legislation & Guidelines
\$6.9	Silt removal facilities such as silt traps or sedimentation facilities will be provided to remove silt particles from	address  Land site & drainage/ During  construction	Contractor(s)	D	C ✓	0	Implemented, observation and	ProPECC PN 1/94 TM Standard under the WPCO
	runoff to meet the requirements of the TM standard under the WPCO. The design of silt removal facilities will be based on the guidelines provided in ProPECC PN 1/94. All drainage facilities and erosion and sediment control structures will be inspected on a regular basis and maintained to confirm proper and efficient operation at all times and particularly during rainstorms. Deposited silt and grit will be removed regularly.						reminder issued. Rectified after observation.	
\$6.9	Earthworks to form the final surfaces will be followed up with surface protection and drainage works to prevent erosion caused by rainstorms.	Land site & drainage/ During construction	Contractor(s)		✓		Implemented	-
S6.9	Appropriate surface drainage will be designed and provided where necessary.	Land site & drainage/ During construction	Contractor(s)		✓		Implemented	-
\$6.9	The precautions to be taken at any time of year when rainstorms are likely together with the actions to be taken when a rainstorm is imminent or forecasted and actions to be taken during or after rainstorms are summarised in Appendix A2 of ProPECC PN 1/94.	Land site & drainage/ During construction	Contractor(s)		<b>√</b>		Implemented.	ProPECC PN 1/94
\$6.9	Oil interceptors will be provided in the drainage system where necessary and regularly emptied to prevent the release of oil and grease into the storm water drainage system after accidental spillages.	Land site & drainage/ During construction	Contractor(s)		<b>√</b>		N/A	-
\$6.9	Temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge, if any, will be adequately designed for the controlled release of storm flows.	Land site & drainage/ During construction	Contractor(s)		✓		N/A	-



EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to	Implementatio n Agent	Implen Stage	nentatio	n	Implementation status	Relevant Legislation & Guidelines
	witigation weasures	address	ii Ageiit	D	С	0		Guidelines
S6.9	The temporary diverted drainage, if any, will be reinstated to the original condition when the construction work has finished or when the temporary diversion is no longer required.	Land site & drainage/ During construction	Contractor(s)		<b>✓</b>		N/A	-
\$6.9	Appropriate numbers of portable toilets shall be provided by a licensed contractor to serve the construction workers over the construction site to prevent direct disposal of sewage into the water environment.	Land site & drainage/ During construction	Contractor(s)		<b>✓</b>		Implemented	-
S6.9 and S6.12	The sterilization water should be dechlorinated with total residual chlorine (TRC) level below 1 mg/L before discharge to public sewer. In situ testing of TRC should also be conducted for the discharge of chlorinated water for pipeline disinfection to ensure sufficient dechlorination before discharge to public sewer.	Sterilization of water mains prior to commissioning	Contractor(s)		<b>√</b>	<b>✓</b>	N/A	Technical Memorandum for Effluents Discharged into Drainage and Sewerage Systems Inland and Coastal Waters
\$6.9	The cleaning and flushing water should also be treated and desilted to the relevant discharge requirement stipulated in TM-DSS before discharging.	Sterilization of water mains prior to commissioning	Contractor(s)		<b>√</b>	<b>√</b>	N/A	Technical Memorandum for Effluents Discharged into Drainage and Sewerage Systems Inland and Coastal Waters
\$6.9	Site drainage should be well maintained and good construction practices should be observed to ensure that oil, fuels, solvents and other chemicals are managed, stored and handled properly and do not enter the nearby water streams.	Land site & drainage/ During construction/ During operation	Contractor(s)		<b>*</b>	<b>✓</b>	Implemented. Observation and reminder issued. Rectified after observation.	-



EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to	Implementatio n Agent	Implementation Stage		Implementation status	Relevant Legislation & Guidelines	
	ivilugation ivieasures	address	n Agent	D	С	0		duidelliles
S6.12	Regular site inspections will be carried out in order to confirm that regulatory requirements are being met and that contractors are implementing the standard site practice and mitigation measures as proposed to reduce potential impacts to water quality.	During construction	Contractor(s)/ Environmental Team (ET) & Independent Environmental Checker (IEC)		*		Implemented	-



	Passammandad Environmental Protection Measures /	Objectives of the recommended	Implementation	Implem	Implementation Stage I	Implementation	Relevant Legislation &	
EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	measures & main concerns to address	Agent	D	С	0	Status	Guidelines
Waste Manage	ment							
S8.5	Nomination of approved personnel to be responsible for standard site practices, arrangements for collection and effective disposal to an appropriate facility of all wastes generated at the site.	Contract mobilisation/ During construction	Contractor(s)		<b>✓</b>		Implemented	-
\$8.5	Training of site personnel in proper waste management and chemical handling procedures. Training will be provided to workers on the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling at the beginning of the construction works.	Contract mobilisation/ During construction	Contractor(s)		✓		Implemented	-
\$8.5	Provision of sufficient waste disposal points and regular collection for disposal.	All area/ During construction/ During operation	Contractor(s)		<b>√</b>	<b>√</b>	Implemented	DEVB TC(W) No. 8/2010, Enhanced Specification for Site Cleanliness and Tidiness
S8.5	Appropriate measures to reduce windblown litter and dust transportation of waste by either covering trucks or by transporting wastes in enclosed containers.	All area/ During construction	Contractor(s)		<b>✓</b>		Implemented	DEVB TC(W) No. 8/2010, Enhanced Specification for Site Cleanliness and Tidiness.
\$8.5	A waste management plan (WMP) as stated in the "ETWB TC(W) No. 19/2005, Environmental Management on Construction Sites" for the amount of waste generated, recycled and disposed of (including the disposal sites) will be established and implemented during the construction phase as part of the Environmental Management Plan (EMP). The Contractor will be required to prepare the EMP and submits it to the Architect/ Engineer under the Contract for approval prior to implementation.	All area/ During construction	Contractor(s)		•		Implemented	ETWB TC(W) No. 19/2005, Environmental Management on Construction Sites
\$8.5	Separation of chemical wastes for special handling and appropriate treatment at the Chemical Waste Treatment Centre at Tsing Yi.	All area/ During construction	Contractor(s)		<b>✓</b>		N/A.	Chapters 2 & 3 Code of Practice on the Packaging, Labelling & Storage of Chemical Wastes published under the Waste Disposal Ordinance (Cap 354), Section 35
S8.5	Regular cleaning and maintenance programme for	Land site/ During construction	Contractor(s)		✓		Implemented,	Waste Disposal Ordinance



	Recommended Environmental Protection Measures/	Objectives of the recommended	Implementation	Implen	nentatio	n Stage	Implementation	Relevant Legislation & Guidelines  (Cap 354)  DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials  WBTC 32/92, The Use of Tropical Hard Wood on Construction Site  ETWB TCW No. 33/2002, Management of Construction and Demolition Material Including Rock  -  WBTC 32/92, The Use of Tropical Hard Wood on Construction Gite
EIA Reference	Mitigation Measures	measures & main concerns to address	Agent	D	С	0	Status	_
	drainage systems, sumps and oil interceptors.						reminder issued.	(Cap 354)
\$8.5	A recording system for the amount of wastes generated/ recycled and disposal sites. The trip-ticket system will be included as one of the contractual requirements and implemented by the contractor(s).	Land site/ During construction	Contractor(s)		<b>✓</b>		Implemented	Trip Ticket System for Disposal of Construction &
\$8.5	Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of material and their proper disposal.	Land site/ During construction/ During operation	Contractor(s)		<b>✓</b>		Implemented	Tropical Hard Wood on
S8.5	Encourage collection of aluminium cans and waste paper by individual collectors during construction with separate labelled bins provided to segregate these wastes from other general refuse by the workforce.	Land site/ During construction	Contractor(s)		<b>✓</b>		Implemented	Management of Construction and Demolition Material
S8.5	Any unused chemicals and those with remaining functional capacity will be recycled as far as possible.	Land site/ During construction	Contractor(s)		<b>✓</b>		N/A	-
\$8.5	Use of reusable non-timber formwork to reduce the amount of C&D materials.	All areas/ During construction	Contractor(s)		<b>*</b>		N/A	
S8.5	Prior to disposal of construction waste, wood, steel and other metals will be separated to the extent practical, for re-use and/or recycling to reduce the quantity of waste to be disposed of to landfill.	All areas/ During construction	Contractor(s)		✓		Implemented	DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials
\$8.5	Proper storage and site practices to reduce the potential for damage or contamination of construction materials.	All areas/ During construction	Contractor(s)		<b>√</b>		Implemented, rectified after observation.	-
S8.5	Plan and stock construction materials carefully to reduce amount of waste generated and avoid unnecessary generation of waste.	All areas/ During construction	Contractor(s)		<b>V</b>		Implemented	-
S8.5	A Sediment Quality Report (SQR) for sampling and chemical testing of the sediment will be prepared and submitted to the EPD for approval. The approved detailed sampling and chemical testing will be carried out prior to the commencement of the dredging activities to confirm the sediment disposal method.	Marine works/ During construction	Contractor(s)		<b>✓</b>		N/A	ETWB TC(W) No. 34/2002 and Dumping at Sea Ordinance (DASO)



	Recommended Environmental Protection Measures/	Objectives of the recommended	Implementation	Imple	mentatio	C C NTatus	Relevant Legislation &	
EIA Reference	Mitigation Measures	measures & main concerns to address	Agent	D	С	0	Status	Guidelines
S8.5	The management of dredged/ excavated sediment management requirement from ETWB TC(W) No. 34/2002 will be incorporated in the Specification of the Contract Documents.	Marine works/ During construction	WSD/ Contractor(s)	)	<b>*</b>		Implemented	ETWB TC(W) No. 34/2002 and Dumping at Sea Ordinance (DASO)
\$8.5	The contractor will open a billing account with EPD in accordance with the Waste Disposal (Charges for Disposal of Construction Waste) Regulation for the payment of disposal charges.	Contract mobilisation/ During construction	Contractor(s)		<b>✓</b>		Implemented	Cap 354N Waste Disposal (Charges for Disposal of Construction Waste) Regulation
\$8.5	A trip-ticket system will be established in accordance with DEVB TC(W) No. 6/2010 to monitor the reuse of surplus excavated materials off-site and disposal of construction waste and general refuse at transfer facilities/ landfills, and to control fly-tipping.	Contract mobilisation/ During construction	Contractor(s)		•		Implemented	DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials
S8.5	The project proponent will also conduct regular inspection of the waste management measures implemented on site as described in the Waste Management Plan.	All area/ During construction	Contractor(s)/ Environmental Team (ET) & Independent Environmental Checker (IEC)		<b>✓</b>		Implemented	ETWB TC(W) No. 19/2005, Environmental Management on Construction Sites
\$8.5	A recording system (similar to summary table as shown in Annex 5 and Annex 6 of Appendix G of ETWB TC(W) No. 19/2005) for the amount of waste generated, recycled and disposed of (including the disposal sites) will be established during the construction phase.	All area/ During construction	Contractor(s)		<b>✓</b>		Implemented	Annex 5 and Annex 6 of Appendix G of ETWB TC(W) No. 19/2005
S8.5	Inert C&D materials (public fill) will be reused within the Project as far as practicable.	All area/ During construction	Contractor(s)		<b>*</b>		Implemented	-
S8.5	Public fill and construction waste shall be segregated and stored in different containers or skips to facilitate reuse or recycling of materials and their proper disposal.	All area/ During construction	Contractor(s)		<b>√</b>		Implemented	-
\$8.5	Specific areas of the work site will be designated for such segregation and storage if immediate use is not practicable.	All area/ During construction	Contractor(s)		<b>√</b>		Implemented	-
\$8.5	To reduce the potential dust and water quality impacts of site formation works, C&D materials will be wetted as	All area/ During construction	Contractor(s)		<b>√</b>		Implemented	Air Pollution Control (Construction Dust)



EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implem	entatio	n Stage	Implementation	Relevant Legislation & Guidelines
				D	С		Status	
	quickly as possible to the extent practice after filling.							Regulation (Cap 311R); WPCO (Cap 358)
S8.5	Open stockpiles of excavated/ fill materials or construction wastes on-site should be covered with tarpaulin or similar fabric.	Land site/ During Construction, particularly dry season	Contractor(s)		<b>√</b>		Rectified after observation.	Air Pollution Control (Construction Dust) Regulation (Cap 311R)
\$8.5	Chemical waste container shall be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed.	All area/ During construction/ During operation	Contractor(s)/ WSD		<b>✓</b>	<b>✓</b>	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
\$8.5	Chemical waste container shall have a capacity of less than 450 L unless the specifications have been approved by the EPD.	All area/ During construction/ During operation	Contractor(s)/WSD		<b>✓</b>	<b>✓</b>	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
\$8.5	A label in English and Chinese shall be displayed on the chemical container in accordance with instructions prescribed in Schedule 2 of the Regulations.	All area/ During construction/ During operation	Contractor(s)/WSD		<b>✓</b>	<b>√</b>	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
\$8.5	Storage areas for chemical waste shall be enclosed on at least 3 sides.	All area/ During construction/ During operation	Contractor(s)/ WSD		<b>√</b>	<b>√</b>	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
\$8.5	Storage areas for chemical waste shall have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest.	All area/ During construction/ During operation	Contractor(s)/ WSD		<b>✓</b>	<b>√</b>	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	Storage areas for chemical waste shall have adequate	All area/ During construction/	Contractor(s)/		✓	✓	Implemented	Waste Disposal (Chemical



	Recommended Environmental Protection Measures/	Objectives of the recommended	Implementation	Imple	mentatio	n Stage	Implementation	Relevant Legislation & Guidelines
EIA Reference	Mitigation Measures	measures & main concerns to address	Agent	D	С	0	Status	
	ventilation.	During operation	WSD					Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	Storage areas for chemical waste shall be covered to prevent rainfall entering (water collected within the bund must be tested and disposed of as chemical waste, if necessary).	All area/ During construction/ During operation	Contractor(s)/ WSD		•	<b>✓</b>	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	Storage areas for chemical waste shall be arranged so that incompatible materials are appropriately separated.	All area/ During construction/ During operation	Contractor(s)/ WSD		<b>√</b>	<b>√</b>	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	General refuse will be stored in enclosed bins or compaction units separately from construction and chemical wastes.	All area/ During construction/ During operation	Contractor(s)/ WSD		<b>√</b>	<b>√</b>	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
\$8.5	Adequate number of waste containers will be provided to avoid over-spillage of waste.	All area/ During construction/ During operation	Contractor(s)/ WSD		<b>1</b>	<b>√</b>	Implemented	DEVB TC(W) No. 8/2010 Enhanced Specification for Site Cleanliness and Tidiness.
\$8.5	A reputable waste collector will be employed by the Contractor to remove general refuse from the site, separately from construction and chemical wastes, on a daily basis to minimise odour, pest and litter impacts.	All area/ During construction/ During operation	Contractor(s)/ WSD		<b>✓</b>	<b>✓</b>	Implemented	-
S8.5	Recycling bins will be provided at strategic locations within the Site to facilitate recovery of recyclable materials (including aluminium can, waste paper, glass bottles and plastic bottles) from the Site.  Materials recovered will be sold for recycling.	All area/ During construction/ During operation	Contractor(s)/ WSD		<b>✓</b>	<b>✓</b>	Implemented	-



	Recommended Environmental Protection Measures/	Objectives of the recommended	Implementation	Implementation Stage	Implementation	Relevant Legislation &		
EIA Reference	Mitigation Measures	measures & main concerns to address	Agent	D	С	0	Status	Guidelines
S8.5	To avoid any odour and litter impact, accurate number of portable toilets will be provided for workers on-site.	All area/ During construction	Contractor(s)		<b>★</b>		Implemented	-
S8.5	The burning of refuse on construction sites is prohibited by law.	All area/ During construction	Contractor(s)		<b>✓</b>		Implemented	Air Pollution Control Ordinance (Cap 311)
S8.7	To facilitate monitoring and control over the contractors' performance on waste management, a waste inspection and audit programme will be implemented throughout the construction phase.	All facilities/ During construction	ET/IEC		✓		Implemented	-



	Recommended Environmental Protection Measures/	Objectives of the recommended		Implen	nentatio	n Stage	Implementation	
EIA Reference	Mitigation Measures	measures & main concerns to address	Implementation Agent	D	С		Status	Relevant Legislation & Guidelines
	Ecology			_			•	
\$9.7	For slope mitigation works within the Clear Water Bay Country Park, to avoid tree felling and damages to trees, the exact locations of the flexible barrier foundation plates, soil nails and rock dowels can be adjusted during detailed design, and a setback distance from existing trees is recommended to be maintained as far as practical. A detailed specification describing the exact locations of the flexible barrier foundation plates, soil nails and rock dowels will be prepared to illustrate how the setback distance from existing trees would be	Slope mitigation works area/ During detailed design/ During construction	Contractor(s)	<b>*</b>	<b>*</b>		Implemented	-
	implemented for tree avoidance.							
S9.7	Pruning of tree canopies along the alignment of the flexible barriers shall be limited to a minimum.	Slope mitigation works area/ During construction	Contractor(s)		<b>/</b>		Implemented	
\$9.7	The alignment of flexible barriers shall be optimized to preserve all species of conservation interest and minimize the impact to the existing vegetation as far as practicable. All individuals of <i>Marsdenia lachnostoma</i> within the slope mitigation areas shall be retained <i>insitu</i> , by positioning the alignment of flexible barrier at a minimum 1.5m in a radius away from these individuals.	Slope mitigation works area/ During detailed design/ During construction	Contractor(s)	<b>V</b>	<b>✓</b>		N/A	-
S9.7 and 9.10	At the detailed design stage prior to the commencement of the slope mitigation works, a vegetation survey shall be carried out at the slope mitigation areas within the Clear Water Bay Country Park to assess the condition and identify the location of each individual of <i>Marsdenia lachnostoma</i> and other flora species of conservation interest that may be directly affected by the construction works.		Contractor(s)	<b>✓</b>	<b>✓</b>		Implemented	-
\$9.7	Temporary fencing will be installed to fence off the concerned species either in groups of individually within the works area and in the close proximity to prevent from being damaged and disturbed during construction. A sign identifying the site shall be attached to the fence and flagging tape shall be attached to the individuals to visualize their locations.	Slope mitigation works area/ During construction	Contractor(s)		<b>✓</b>		N/A	-



	December and of Faring was asked Durchestian Massaures /	Objectives of the recommended	ll	Implementation Stage			Implementation	
EIA Reference	Mitigation Measures	measures & main concerns to address	Implementation Agent	D	С	0	Status	Relevant Legislation & Guidelines
S9.7 and S9.10	A specification for fencing and demarcating individuals of <i>Marsdenai lachnostoma</i> (or other flora species of conservation interest, if found) adjacent to the proposed alignment of the flexible barriers will be prepared to protect the species.	Slope mitigation works area/ During construction	Contractor(s)		<b>√</b>		N/A	-
\$9.7	Induction training shall also be provided to all site personnel in order to brief them on this flora of conservation interest including the locations and their importance.	Slope mitigation works area/ During construction	Contractor(s)		<b>✓</b>		N/A	-
\$9.7	The resident site supervisory staff will closely monitor the conditions of concerned individuals during construction of flexible barriers in the close proximity.	Slope mitigation works area/ During construction	Contractor(s)		<b>✓</b>		N/A	-
\$9.7	Erect fences along the boundary of the works area before the commencement of works to prevent vehicle movements and encroachment of personnel onto adjacent areas.	All area/ During construction	Contractor(s)		<b>✓</b>		Implemented	-
\$9.7	Regularly check the work site boundaries to ensure that they are not breached and that damage does not occur to surrounding areas.	All area/ During construction	Contractor(s)/ Environmental Team (ET)		<b>√</b>		Implemented, rectified after observation.	-
\$9.7	Avoid any damage and disturbance, particularly those caused by filling and illegal dumping, to the surrounding habitats through proper management of waste disposal.	All area/ During construction	Contractor(s)		<b>*</b>		Implemented, reminder issued.	-
\$9.7	Reinstate temporarily affected areas, particularly the habitats of plantation and shrubland-grassland immediately after completion of construction works, through on-site tree/shrub planting. The tree/shrub species will be chosen with reference to those in the surrounding area.	All area/ During construction	Contractor(s)		<b>√</b>		N/A	-
S9.7	Affected habitats within the Clear Water Bay Country Bay shall be reinstated by hydro-seeding and planting of climbers and native shrub seedlings where practical upon completion of the slope mitigation works.	All area/ During construction	Contractor(s)		<b>✓</b>		N/A	-



	Recommended Environmental Protection Measures/	Objectives of the recommended	Implementation	Impler	nentatio	n Stage	Implementation	
EIA Reference	Mitigation Measures	measures & main concerns to address	Agent	D	С	0	Status	Relevant Legislation & Guidelines
	Landscape & Visual							
S11.10 & 11.11	The construction area and area allowed for temporary	All area/ Detailed design/	WSD/	✓	✓	✓	Implemented	-
	structures, such as the contractor's office, will be	During construction/ During	Contractor(s)					
	minimized to a practical minimum. (MM1)	operation						
S11.10 & 11.11	At the detailed design stage, the design team will seek	All area/ Detailed design/	WSD/	✓	✓	✓	Implemented	-
	to minimize the landscape footprint of the Project and	During construction/ During	Contractor(s)					
	above ground facilities, while satisfying all other	operation						
	requirements. (MM2)				ļ.,			
S11.10 & 11.11	Design principles will be adopted to take into account	All area/ Detailed design/	WSD/	✓	<b>✓</b>	<b>✓</b>	Implemented	-
	the surrounding area, particularly Clear Water Bay	During construction/ During	Contractor(s)					
	Country Park behind and the nearby waterfront, with	operation						
	due consideration given to:							
	- green roofs where practical (ie without equipment on							
	the roof);							
	- roadside planting;							
	- aesthetic treatment of all structures;							
	<ul> <li>vertical greening;</li> <li>screen planting along application site; and</li> </ul>							
	- landscape enhancement with amenity planting where							
	practical including planting along the edge (site							
	boundary) fence with native shrubs where feasible,							
	- to reduce their visual impact and blend them into the							
	surrounding landscape. (MM3)							
S11.10 & 11.11	All trees within the Project Site or the potential slope	All area/ Detailed design/	WSD/	1	1	<b>/</b>	Implemented,	ETWB TCW No. 3/2006 -
311.10 @ 11.11	mitigation works area will be carefully protected	During construction/ During	Contractor(s)				reminder issued.	Tree Preservation.
	during construction according to DEVB TCW No.	operation	001111 00101 (0)				Terrinder issued:	Tree reservation.
	10/2013 – Tree Preservation (MM4)	operation:						
S11.10 & 11.11	No tree within the Country Park will be felled. Trees	All area/ Detailed design/	WSD/	<b>√</b>	✓	✓	Implemented	DEVB TC(W) No. 10/2013
	within the Site unavoidably affected by the works will be	During construction/ During	Contractor(s)				· '	
	transplanted where necessary and practical. For	operation						
	trees that need to be felled, compensatory planting will							
	be provided to the satisfaction of relevant Government							
	departments.							
	A compensatory tree planting proposal including							
	locations of tree compensation will be submitted to							
	seek relevant government department's approval, in							



	Recommended Environmental Protection Measures/	Objectives of the recommended	luculous autation	Implementation Stag	tion Stage Implementation			
EIA Reference	Mitigation Measures measures & main address	measures & main concerns to address	Implementation Agent	D	С	0	Status	Relevant Legislation & Guidelines
	accordance with DEVB TC(W) No. 10/2013. (MM5)							
S11.10 & 11.11	Any slope mitigation works necessary to address natural terrain hazards, will be minimized to minimize any potential environmental impact to the Country Park e.g. soil nailing and rock stabilization will aim to avoid existing trees e.g. should any restoration of vegetation be necessary, the best planting matrix with native species will be established, with the aim of resembling the existing vegetation. (MM6)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	•	<b>*</b>	•	N/A	
\$11.10 & 11.11	Dredging works for the installation of intake structures and outfall diffusers should be minimized to avoid or reduce any potential environmental impacts to as low as reasonably practicable (ALARP). The intake and outfall structures (e.g. intake openings and diffuser heads) will be prefabricated and transferred to site for installation. (MM7)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	1	1	<b>√</b>	N/A	
S11.10 & 11.11	All night-time lighting will be reduced to a practical minimum both in terms of number of level and will be hooded and directional. (MM8)units and lux level and will be hooded and directional. (MM8)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	<b>*</b>	<b>√</b>	<b>√</b>	Implemented	-



	Recommended Environmental Protection Measures/	Objectives of the recommended	Implementation	Implen	nentatio	n Stage	Implementation	
EIA Reference	Mitigation Measures	measures & main concerns to address	Agent	D	С	0	Status	Relevant Legislation & Guidelines
	Landfill Gas Hazard				•	•		
S12.7	During all works, safety procedures should be implemented to minimise the risks of fires and explosions, asphyxiation of workers and toxicity effects resulting from contact with contaminated soil and groundwater.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	<b>*</b>	<b>✓</b>	<b>*</b>	Implemented	-
S12.7	During trenching and excavation as well as creation of confined spaces at near to or below ground level, precautions should be clearly laid down and rigidly Gas detection equipment and appropriate breathing apparatus should be available and used when entering confined spaces or trenches deeper than 1 metre.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	<b>*</b>	<b>✓</b>	<b>✓</b>	Implemented	
S12.7	The Contractor should make the workers are aware of potential hazards of working in confined spaces (any chamber, manhole or culvert which is large enough to permit access to personnel). Such work in confined spaces is controlled by the Factories and Industrial Undertakings (Confined Spaces) Regulations of the Factories and Industrial Undertakings Ordinance. Following the Safety Guide to Working in Confined Spaces ensures compliance with the above regulations.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	<b>✓</b>	1	~	Implemented	
S12.7	Safety officers, specifically trained with regard to landfill gas and leachate related hazards and the appropriate actions to take in adverse circumstances, should be present on the site throughout the works, in particular, when works are undertaken below grade.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	<b>*</b>	<b>√</b>	<b>✓</b>	Implemented	
S12.7	All personnel who work on site and all visitors to the site should be made aware of the possibility of ignition of gas in the vicinity of the works, the possible presence of contaminated water and the need to avoid physical contact with it.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	<b>✓</b>	<b>✓</b>	<b>✓</b>	Implemented	
S12.7	Monitoring for landfill gas should be undertaken in all excavations, manholes, chambers (particularly during pipe jacking) and any confined spaces through the use of an intrinsically safe portable instrument, appropriately calibrated and capable of measuring the concentrations	All area/ Detailed design/ During construction/ During operation	Contractor(s)	<b>✓</b>	<b>✓</b>	<b>√</b>	Implemented	



		Objectives of the recommended		Implen	nentatio	n Stage	Implementation	
EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	measures & main concerns to address	Implementation Agent	D	С		Status	Relevant Legislation & Guidelines
	of methane. carbon dioxide and oxygen.							
S12.7	Monitoring frequency and areas to be monitored should be specified prior to commencement of groundwork, either by the Safety Officer, or by an appropriately qualified person. All measurements should be recorded and documented.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	<b>✓</b>	<b>✓</b>	<b>√</b>	Implemented	
S12.7	Proceed drilling with adequate care and precautions against the potential hazards which may be encountered.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	<b>*</b>	<b>V</b>	<b>V</b>	Implemented	
S12.7	Prior to the commencement of the site works, the drilling contractor should devise a 'method-of-working' statement covering all normal and emergency procedures (including but not limited to number of operatives, experience and special skills of operatives, normal method of operations, emergency procedures, supervisors responsibilities, storage and use of safety equipment, safety procedures and signs, barriers and guarding). The site supervisor and all operatives must be familiar with this statement.	All area/ During construction/ During operation	Contractor(s)	•	<b>*</b>	<b>✓</b>	Implemented	
S12.7	Where below ground service entries are necessary to the Incoming Switchgear Room, 132 kV Substation and Chlorine Store (I) and (II), the entry point should be sealed to prevent gas entry. In addition, any below grade cable trenches entering the Incoming Switchgear Room and 132 kV Substation can become the pathway for landfill gas and hence grilled metal covers should be used.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	<b>√</b>	<b>✓</b>	~	N/A	
S12.7	It is recommended regular landfill gas monitoring should be carried out at the Incoming Switchgear Room, 132 kV Substation and Chlorine Store (I) and (II). The monitoring frequency will be monthly for the first year of operation. If the monitoring results show no sign of landfill gas migration, reduce the monitoring frequency to once every six months.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	~	<b>*</b>	<b>*</b>	N/A	
S12.7	The manholes and utility pits within the Project Site and along the fresh water mains. Each manhole/ utility	All area/ Detailed design/ During construction/ During	Contractor(s)	<b>*</b>	<b>√</b>	<b>√</b>	Implemented	



	Recommended Environmental Protection Measures/	Objectives of the recommended	Implementation	Implen	nentatio	n Stage	Implementation	
EIA Reference	Mitigation Measures	measures & main concerns to address	Agent	D	С	0	Status	Relevant Legislation & Guidelines
	pit should be monitored with two measurements (at mid depth and base). Each measurement should be monitored for a minimum of 10 minutes. A steady reading and peak reading should be recorded at each manhole/ utility pit and for each measurement.  The need for venting the manhole/ utility pit and further monitoring will be reviewed after the initial monitoring.	operation						
\$12.7	All construction, operation and maintenance personnel working on-site as well as visitors should be made aware of the hazards of landfill gas and its possible presence on-site. This should be achieved through a combination of posting warning signs in prominent places and also by access to detailed information on landfill gas hazards and the designs and procedural means by which these hazards are being minimized on-site.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	<b>✓</b>	<b>√</b>	<b>√</b>	Implemented	

Note: D – Design stage C – Construction O – Operation



# Appendix D

Impact Monitoring Schedule of the Reporting Month



			Dec-21			
Sun	Mon	Tue		Thu	Fri	Sat
			Noise Impact Monitoring	2	3	4
	6	7	Noise Impact Monitoring	9	10	11
				16	Noise Impact Monitoring	18
19	20	Noise Impact Monitoring	22	23	24	25
26	27	28	29	30	Noise Impact Monitoring	



Appendix E

Noise Monitoring Calibration Certificate

Equipment



# Certificate of Calibration

for

Description:

Sound Level Meter

Manufacturer:

SVANTEN

Type No.:

971 (Seriel No.: 95062)

Microphone:

ACG 7952 E (Serial No.:78090)

Preamplifier:

V NTEK SV 18 (Serial No.:103808)

Supmitted by:

Customer:

Acui y Sustainability Consulting Limited

Address:

Unit 1908, Nos. 301-305 Castle Peak Road,

Kwai Chung, N.T.

Upon receipt for calibration, the instrument was found to be.

Within (31.5 Hz to /K Hz)

☐ Outside

the allowable tolerance.

The test equipment used for calibration are traceable to National Standards via:

The Government of The Hong Kong Special Admini tra ive Region Standard & Calibration Laboratory

Date of receipt: 2 July 2021

Date of calibration: 5 July 2021

Calibrated by:

Calibration Tec in cian

Certified by:

Date of is: ue: Jaly 2021

Mr. Ng Yan Wa Laboratory Manager

Rage 1 of 4

Certificate No.: APJ21-029 CC001

Room 422, Leader Ind us rial Centre, 57-59 Au Pui Wan Street , Fo Tan, Shatin, N.T., Hong Kong
Tel: (852) 2668 3423 Fax: (852) 2668 6946



# (**人 + A**) \* L Acoustics and Air Testing Laboratory Co. Ltd. 聲學及空氣測試實驗室有限公司

#### 1. Calibration Precaution:

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements of each calibration point.

#### 2. Calibration Conditions:

 Air Temperature:
 24.2 °C

 Air Pressure:
 1004 hPa

 Relative Humidity:
 60.8 %

#### 3. Calibration Equipment:

Multifunction Calibrator

Type Serial No. Calibration Rep r Number

B& \( \frac{422}{422} \) 2288467 AV200041 HOKLAS

### 4. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

Set	Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1	
Range, dB	Freq. W	eighting	Tim. Weighting	Level, aB	Frequency, Hz	dB	Specification, dB	
20-140	αВА	SPL	Fast	94	1000	94.0	±0.4	

#### Linearity

Setting of Unit-under-test (UUT)			apr lied value		UUT Reading,	IEC 61672 Class 1	
Range, dB	Freq. W	eighting	Time Weighting	Level, B	Frequency, Hz	dB	Specification, dB
				94		94.0	Ref
20-140	dBA	SPL	Fası	104	1000	104.0	±0.3
				114		114.0	±0.3

Time Weigning

Setti	Setting of Unit-under-test (UUT)			Appl	licd value	UUT Reading,	IEC 61672 Class 1
Range, dF	req. W	eighting	7 ine Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
20-140	dBA	SPL	Fast	94	1000	94.0	Ref
2.140	UDA	SEL	Slow	94	1000	94.0	±0.3

Certificate No.: APJ21-029-CC001

Page 2 of 4

Room 422, Leader Incur (rial Centre, 57-59 Au Pui Wan Street , Fo Tan, Shatin, N.T., Hong Kong Tel: (852) 2668 3423 Fax: (852) 2668 6946 Homepage: http://www.aa-lab.com E-mail: inquiry@aa-lab.com



## (A+A)\*L

#### Acoustics and Air Testing Laboratory Co. Ltd.

聲學及空氣測試實驗室有限公司

Frequency Response

Linear Response

Sett	ing of Uni	t-under-t	est (UUT)	Appli d value UUT Reading,			IEC 61672 Class 1
Range, dB	Freq. W	eighting	Time Weighting	Level, dF	requency, Hz	dB	Specification, dB
				4	31.5	94.1	±2.0
					63	94.1	±1.5
					125	94.1	±1.5
20-140	dB SPL	SPI	Fast	94	250	94.1	±1.4
		Si E		14	300	94.1	±1.4
					1000	94.0	Ref
					2000	93.8	±1.6
					4000	93.3	-1/5

A-weighting

Sett	Setting of Unit-under-test (UU'')			Applied value		IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB			Specification, dB
				31.5	54.9	-39.4 ±2.0
				63	68.0	-26.2 ±1.5
	^			125	78.0	-16.1 ±1.5
20-140	dBA SPL	Fast	94	250	85.4	-8.6 ±1.4
20 110			34	500	90.8	-3.2 ±1.4
				1000	94.0	Ref
				2000	95.0	+1.2 ±1.6
				4000	94.3	+1.0 ±1.6

C-weighting

Sett	Setting of Unit-under cest (UUT)			A) pl	i d value	UUT Reading,	IEC 61672 Class
Range, dB	Freq. W	eighting	Time Weighting	Level, B	Frequency, Hz	dB	Specification, dB
					31.5	91,1	-3.0±2.0
					63	93.3	-0.8 ±1.5
					125	93.9	-0.2 ±1.5
20-140	dBC	SPL	Fast	94	250	94.1	-0.0 ±1.4
20 110	uixe	SLE	1 431	) <sup>34</sup>	500	94.1	-0.0 ±1.4
					1000	94.0	Ref
					2000	93.6	-0.2 ±1.6
					4000	92.5	-0.8 ±1.6

Certificate No.: APJ?1-029-CC001

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# 

#### 5. Calibration Results Applied

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 61672 Class 1.

Uncertainties of Applied Value:

94 dB	31.5 Hz	± 0.15
	63 Hz	± 0.10
	125 Hz	± 0.05
	250 Hz	± 0.05
	500 Hz	± 0.05
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.05
104 dB	1000 Hz	± 0.05
114 dB	1000 Hz	± 0.05

The uncertainties are evaluated for a 95% confidence level.

#### Note:

The values given in this certification only related to the values measured at the time of the calibration and any uncertainties quoted will not allow for the equipment long term drift, variations with environmental energies, vibration and shock during transportation, everloading, mis-handling, or the capability of any other laboratory to repeat the calibration. (A+A)\*L shall not be liable for any loss or damage resulting from the use of the equipment.

Certificate No.: 41.121-020-CC001

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(A+A) \*L

(A+A) \*L





# Certificate of Calibration

for

Description:	Sound	Level	Meter

Manufacturer: NTi Aua.o

Type No.: XL2 (Serial No.: A24-13661-E0)

Microphone: ACO 7/52 (Serial No.: 73912)

Preamplifier: NTi Audio MA220 (M2211) (Serial No.:5735)

Supmitted by:

Customer: A wity Sustainability Consulting Limited

Address: Un't C, LUF, Ford Glory Plaza, No. 37-39 W ng Hong

Street Cheung Sha Wan, Kowloon

Upon receipt for calibration, the instrument was found to be: ☑ Within (31.5 Hz - 8k Hz) ☐ Outside the allowable tolerance. The test equipment used for calibration are traceable to National Standards via: The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory Date of receipt: 17 September 2021 Date of calibration: 23 September 2021 Calibrated by: Certified by: Calibration Tech vician Mr. Ng Yan Wa aboratory Manager Date of issue. 27 September 2021 Page 1 of 4 Certificate No.: APJ?1-085 CC001

Room 422,Leader In Iustrial Centre,57-59 Au Pui Wan Street ,Fo Tan, Shatin,N.T.,Hong Kong Tel: (852) 2668 3423 Fax:(852) 2668 6946



# (**A+A**) \* L Acoustics and Air Testing Laboratory Co. Ltd. 聲學及空氣測試實驗室有限公司

#### 1. Calibration Precaution:

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

#### 2. Calibration Conditions:

Air Temperature: 24.0 °C
Air Pressure: 1001 hPa
Relative Humidity: 55.7 %

#### 3. Calibration Equipment:

Type Serial No. Calibration Report Number Trace h'e to Multifunction Calibrator B&K 42.6 2288467 AV200041 HOK J.S.

#### 4. Calibration Results

Sound Pressure Level

Reference Sound Fressare Level

Set	ing of Uni	t-under-t	est (UUT)	App	lied value	UUT Reading,	, IEC 61672 Class 1	
Range, dB	Freq. W	eighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB	
30-130	αВА	SPT	Fast	94	1000	94.0	±0.4	

#### Linearity

Sett	ing of Uni	t-under-t	est (UUT)	Applied value UUT Read		UUT Reading,	, IEC 61672 Class 1
Range, dB	Freq. W	eighting	Time Weighting	Level, aB	Frequency, Hz	dB	Specification, dB
				94		94.0	Ref
30-130	dBA	SPL	Fast	104	1000	104.0	±0.3
				114		114.0	±0.3

Time Weigning

Set	ting of U	nit-under-t	est (UUT)	App	lied value	UUT Reading,	IEC 61672 Class 1 Specification, dB
Range, d'S	Freq. V	Weighting	Cime Weighting	Level, dB	Frequency, Hz	dB	
32-130	dBA	SPL	Fast	94	1000	94.0	Ref
37-130	UDA	OF L	Slow	5/4	1000	94.0	±0.3

Certificate No.: APJ21-085 CC001

(A+A) \*L 2 Pag 2 of 4

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## (A+A)\*L

#### Acoustics and Air Testing Laboratory Co. Ltd.

登學及空氣測試實驗室有限公司

Frequency Response

Linear Response

Sett	Setting of Unit-under-test (UUT)			Appl	ed value	UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Wei	ghting	Time Weighting	Level, dr.	Frequency, Hz	dB	Specification, dB
				~	31.5	94.1	±2.0
					63	94.1	±1.5
					125	94.1	±1.5
					250	94.0	+1.4
30-130	dB	SPL	Fast	94	500	94.0	±1.4
					1000	94.0	Ref
					2000	94.3	±1.6
			//		4000	95.1	-1.6
			//		8000	94.3	= 2/1; -3.1

A-weighting

Sett	Setting of Unit-under-test (UUT)			Applied value		IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
				31.5	54.7	-39.4 ±2.0
				63	67.9	-26.2 ±1.5
				125	73.0	-16.1 ±1.5
				250	85.4	-8.6 ±1.4
30-130	∂BA SPL	Fast	94	500	90.8	-3.2 ±1.4
				1000	94.0	Ref
	/ /			2000	95.5	+1.2 ±1.6
- 1				4000	96.1	+1.0 ±1.6
				8000	93.9	-1.1+2.1; -3.1

C-weighting

Sett	Setting of Unit-under-test (UUT)			Applied value		IEC 61672 Class 1
Range, dB	Freq. Weighting	Tire Weighting	Veighting Level, dB Frequency, Hz	dB	Specification, dB	
				31.5	91.1	-3.0 ±2.0
			1	63	93.3	-0.8 ±1.5
			P	125	93.9	-0.2 ±1.5
				250	94.0	-0.0 ±1.4
30-130	dBC SPL	East	94	500	94.0	$-0.0 \pm 1.4$
	7 -			1000	94.0	Ref
				2000	94.2	-0.2 ±1.6
		)/	4:	4000	94.3	-0.8 ±1.6
		//		8000	91.3	-3.0 +2.1: -3.1

Certificate No.: APJ71-085-CC001

SECTION LABORATES

Page 3 of 4

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Homepage: http://www.aa-lab.com E-mail:



# (A+A)\* L Acoustics and Air Testing Laboratory Co. Ltd. 聲學及空氣測試實驗室有限公司

#### 5. Calibration Results Applied

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as  $\rm IEC~61672~Class~1$ .

Uncertainties of Applied Value:

94 dB	31.5 Hz	± 0.05	
	63 Hz	± 1.05	
	125 Hz	+ 0.05	
	250 Hz	± 0.05	
	500 Hz	± 0.05	
	1000 Hz	± 0.05	
	2000 Hz.	± 0.05	
	4000 Hz	± 0.05	
	8000 Hz	± 0.10	
104 dB	1000 Hz	± 0.05	
114 dB	1000 Hz	± 0.05	

The uncertainties are evaluated for a 15% confidence level.

#### Note:

The values given in this certification only related to the values measured at the time of the calibration and any uncertainties quoted will not allow for the equipment long-term drift, variations with environment I changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the calibration. (A+A)\*L shall not be liable for any loss or damage resulting from the use of the equipment.

Certificate No.: APJ21-085-CC001

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Page 4 of 4

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Homepage: http://www.aa-lab.com E-mail: inquiry@aa-lab.com





# Certificate of Calibration

for

Description:	Sound Level Meter
Manufacturer:	NTi Audio

 Type No.:
 XL2 (Serial No.: A2A-17638-E0)

 Microphone:
 ACO 7052 (Serial No.:68746)

Preamplifier: NTi Audio M2211 MA220 (Serial No.:7014)

Submitted by:

Customer: Acuity Sustainability Consulting Limited

Address: Unit C, 11/F., Ford Glory Plaza, No. 37-39 Wing Hong Street,

Cheung Sha Wan, Kowloon

Upon receipt for calibration, the instrument was found to be:

Within
Outside

The test equipment used for calibration are traceable to National Standards via:
The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

Date of receipt: 22 March 2021

Date of calibration: 24 March 2021

Calibrated by: \_\_\_\_\_ Certified by: \_\_\_\_\_ Mr. Ng Yan Wa
Laboratory Manager

Date of issue: 24 March 2021

Certificate No.: APJ20-185-CC001

Room 422,Leader Industrial Centre,57-59 Au Pui Wan Street ,Fo Tan, Shatin,N.T.,Hong Kong
Tel: (852) 2668 3423 Fax:(852) 2668 6946
Homepage: http://www.aa-lab.com E-mail: inquiry@aa-lab.com



# Acoustics and Air Testing Laboratory Co. Ltd. 聲學及空氣測試實驗室有限公司

#### 1. Calibration Precaution:

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

#### 2. Calibration Conditions:

 Air Temperature:
 23.2 °C

 Air Pressure:
 1006 hPa

 Relative Humidity:
 57.6 %

#### 3. Calibration Equipment:

	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV200041	HOKLAS

#### 4. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

Sett	ing of Uni	it-under-t	est (UUT)	Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. W	eighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA	SPL	Fast	94	1000	94.1	±0.4

#### Linearity

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1	
Range, dB	Freq. W	eighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
				94		94.1	Ref
30-130	dBA	SPL	Fast	104	1000	104.1	±0.3
				114		114.1	±0.3

#### Time Weighting

Sett	ing of Uni	t-under-t	est (UUT)	Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. W	eighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA	SPL	Fast	94	1000	94.1	Ref
30-130	dBA	SPL	Slow	94	1000	94.1	±0.3

Certificate No.: APJ20-185-CC001

Page 2 of 4

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Homepage: http://www.aa-lab.com E-mail: inquiry@aa-lab.com



### 

Frequency Response

Linear Response

Sett	ing of Unit	t-under-t	est (UUT)	Appl	ied value	UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting		Time Weighting	Level, dB	Level, dB Frequency, Hz		Specification, dB
					31.5	94.1	±2.0
					63	94.2	±1.5
			Fast	94	125	94.2	±1.5
					250	94.1	±1.4
30-130	dB	SPL			500	94.2	±1.4
					1000	94.1	Ref
					2000	94.3	±1.6
					4000	94.6	±1.6
					8000	92.8	+2.1; -3.1

A-weighting

Sett	ing of U	nit-under-t	est (UUT)	Appl	ied value	UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting		Time Weighting	Level, dB	Level, dB Frequency, Hz		Specification, dB
					31.5	54.7	-39.4 ±2.0
					63	68.0	-26.2 ±1.5
			Fast	94	125	78.1	-16.1 ±1.5
					250	85.5	-8.6 ±1.4
30-130	dBA	SPL			500	91.0	-3.2 ±1.4
					1000	94.1	Ref
					2000	95.5	+1.2 ±1.6
					4000	95.6	+1.0 ±1.6
					8000	91.8	-1.1+2.1; -3.1

#### C-weighting

Sett	ing of Un	it-under-t	est (UUT)	Appl	ied value	UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. V	Veighting	Time Weighting	Level, dB	Level, dB Frequency, Hz		Specification, dB
					31.5	91.1	-3.0 ±2.0
			,		63	93.3	-0.8 ±1.5
			Fast	94	125	94.0	-0.2 ±1.5
					250	94.1	-0.0 ±1.4
30-130	dBC	SPL			500	94.2	-0.0 ±1.4
					1000	94.1	Ref
					2000	94.1	-0.2 ±1.6
					4000	93.8	-0.8 ±1.6
					8000	89.8	-3.0 +2.1: -3.1

Certificate No.: APJ20-185-CC001

(A+A) \*L

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#### 5. Calibration Results Applied

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 61672 Class 1.

Uncertainties of Applied Value:

94 dB	31.5 Hz	± 0.10
	63 Hz	± 0.05
	125 Hz	± 0.05
	250 Hz	± 0.05
	500 Hz	± 0.05
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.05
	8000 Hz	± 0.10
104 dB	1000 Hz	± 0.05
114 dB	1000 Hz	± 0.05

The uncertainties are evaluated for a 95% confidence level.

#### Note:

The values given in this certification only related to the values measured at the time of the calibration and any uncertainties quoted will not allow for the equipment long-term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the calibration. (A+A)\*L shall not be liable for any loss or damage resulting from the use of the equipment.

Certificate No.: APJ20-185-CC001

(A+A) \*L

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#### **CALIBRATION CERTIFICATE**

Certificate Informat	ion	
Date of Issue	7-Aug-2021	Certificate Number MLCN212053S
Customer Information	on	
Company Name Address	Acuity Sustainability Consulting Lim Unit C, 11/F., Ford Glory Plaza, Nos. 37-39 Wing Hing Street, Cheung Sha Wan, Kowloon, HK	ited
Equipment-under-To	est (EUT)	
Description Manufacturer Model Number Serial Number Equipment Number	Acoustic Calibrator Pulsar 105 63705	
Calibration Particul	ar	
Date of Calibration Calibration Equipment	7-Aug-2021 4231(MLTE008) / AV200063 / 23-Ju 1357(MLTE190) / MLEC21/05/02 / 2	
Calibration Procedure	MLCG00, MLCG15	
Calibration Conditions	Laboratory Temperature Relative Humidity EUT Stabilizing Time Warm-up Time Power Supply	23 °C ± 5 °C 55% ± 25% Over 3 hours Not applicable Internal battery
Calibration Results	Calibration data were detailed in the c All calibration results were within EU	
Approved By & Date		1
<ul> <li>The results on this Calibrati not include allowance for th overloading, mishandling, n</li> <li>MaxLab Calibration Centre</li> <li>The copy of this Certificate</li> </ul>	e EUT long term drift, variation with environm nisuse, and the capacity of any other laboratory Limited shall not be liable for any loss or dam	d at the time of the calibration and the uncertainties quoted wil- nental changes, vibration and shock during transportation, to repeat the measurement.

Page 1 of 2

萬 儀 校 正 中 心 有 限 公 司 MaxLab Calibration Centre Limited 香港新界葵涌華星街 16-18 號保盈工業大廈 9 樓 B 室 Unit 8, 9/F., Boldwin Industrial Blog., 16-18 Wah Sing Street, Kwei Chung, N.T., Hong Kong Tel: (852) 2116 1389 Fax: (852) 2264 6480 Email: info@maxlab.com.hk





Certificate No.

MLCN212053S

Calibration Data				
EUT Setting	Standard Reading	EUT Error from Setting	Calibration Uncertainty	EUT Specification
94 dB	93.9 dB	-0.1 dB	0.20 dB	± 0.2 dB

- END -

Calibrated By: Date:

Keneth 7-Aug-21 Checked By: Date:

K.O. Lo 7-Aug-21

Page 2 of 2

萬 儀 校 正 中 心 有 限 公 司 MaxLab Calibration Centre Limited 香港新界葵涌華星街 16-18 號保盈工業大厦 9 櫻 B 室 Unit B, 9/F., Boldwin Industrial Bidg., 16-16 Wah Sing Street Kwai Chung, N.T., Hong Kong Tel: (852) 2116 1380 Fax: (852) 2264 6480 Email: info@maxlab.com.hk







This instrument was produced under rigorous factory production control and documented standard procedures. It was individually visually inspected, leak tested and function tested for display, backlight, button and software performance. The accuracy of each of its primary measurements was individually calibrated and/or tested against standards traceable to the National Institute of Standards and Technology ("NIST") or calibrated intermediary standards. This instrument is certified to have performed at the time of manufacture in compliance with the following specifications as they apply to this meter's specific model, measurements and features.

#### Methods Used in Calibration and Testing

#### Wind Speed:

The Kestrel Weather & Environmental Meter impeller installed in this unit was individually tested in a subsonic wind tunnel operating at approximately 300 fpm (1.5 m/s) and 1200 fpm (6.1 m/s) menitored by a Gill Instruments Model 1350 ultrasonic time-of-flight anamometer. The Standard's maximum combined uncertainty is +/-1.04% within the airspeed range 706.6 to 3923.9 fpm (3.59 to 19.93 m/s), and +/-1.66% within the airspeed range 166.6 to 706.6 fpm (0.86 to 3.59 m/s).

#### Temperature:

Temperature response is vertified in comparison with a Eutochnica 4600 Precision Thermometer or a standard Kestrel 4000 Weather & Environmental Meter calibrated weekly against the Eutochnics 4600. The Eutochnics 4600 is calibrated annually and is traceable to NIST with a system accuracy of +/- 0.05 °C.

#### Direction / Heading

The sensitivity of the magnetic directional sensor is verified at the component level by applying a magnetic field to the sensor and measuring the signal output at 4 points, as well as after assembly by orienting the unit to the cardinal directions and measuring the magnetic field output. In both cases, the compass output must be accurate to within 4/– 5 degrees.

#### Relative Humidity:

Relative humidity receives a two-point calibration in humidity and temperature controlled chambers at 75,3% RH and 32.8% RH at 25° C. The calibration tanks are monitored with an Edgetech Model 2002 DewPrime II Standard Chilled Mirror Hygrometer. Following calibration, performance is further verified at an RH of approximately 40.2% against the Edgetech Hygrometer. The Edgetech Hygrometer is calibrated annually and is traceable to NIST with a maximum relative expanded uncertainty of 4/– 0.2% RH.

#### Barometric Pressure:

Pressure response is verified against a Valsala PTB210A Digital Barometer or a standard Kestrel 4000 Weather & Environmental Meter calibrated weekly against the Valsala Barometer. The Valsala Barometer is calibrated annually and is traceable to NIST with an eccuracy of +/-0.15 hPa at +20°C defined as the root sum of the squares (RSS) of end point non-linearity, hysteresis error, repeatability error and calibration uncertainty at room temperature.

Approved By:

Michael Naughton, Engineering Manager

The exclosed Kestral Weather & Environmental Meter was manufactured by Nessen-Kesterman Co. at its facilities located at 21 Creek Circle, Boothwyn, PA 19061 USA.



2000	2500	3000	3600	3500 OT	4000	4200	4260	4300	4500	B¢ll lettes	ACCURACY (41.)*	HESOLUTION	SPECIFICATION RANGE	RANGE	NOTES
											Larger of 3% of roading, least	C.1 m/s \$ Minuh 0.1 km/h	0,6 to 40,0 m/s 118 to 7,874 fb/min 2,2 to 144,0 km/h	0.6 to 60.0 mls 118 to 11,611 fV/min 2.2 to 216.0 km/h	mph   .5 kt after Impelier statup. Off-axis accuracy -1% Q 5° off-axis; -2% Q 10°; -3% Q.
•	•	۰	•	0	۰	۵	9	•	ø		significant digit or 20 filmin	0.1 knots 1 B* 9 1 E/S*	1.3 to 39.5 mph 1.2 to 77.8 knots 9 to 12.8* 2-131.2*	1.2 to 116,6 knots 0 to 12 B	Califeration of it = 106 after 100 hours use at 18 MPH [7 mis. Replacement impolar (NK P 0801) field installs without book (US Pazent 8,783,783). What speed cauliforation and testing should be come with stangle on triplefal located at the lop front face of like Kestrel.
									:			9.1 F/G*	243121	2-198.9 F/S*	*FIS only in Ballistics units. Besufurt not available in Ballistics units.  Hermotically scaled, precision the mistor mounted externally and the unally isolated (US)
•	٠	,	•	•		•		•	•	•	0.9 °F 0.6 °G	0.1 °F 0.5 °C	-20.0 to 156.0 °F -29.9 to 70.0 °C	14.9.9 to 131.0 °F -10,0 to 55,0 °C	Patent (3,303,645) for rail of response. Afferow of 2.2 mph) if mis or greater provides farebut expense and reduction of inscission effect. Celebration or rit resignable. The misses may also be used to measure inegeneture of water or series by submissigning thermistic portion into material—service impeter prior to taking submission assurements and none insulfact entry misses.
															sübmersbin.  Polymer babodilive humidily sensor mounted in thin-walled chamber sciental to case for
		o	ø	ø	•	. •		٠		• .	3.0 %RH	0.1 %RH	5 to 95% non-conducting	@ to 100%	ragit, accurate response (US Patert 8,207.074). To achieve stated accuracy, unit must be permitted to equilibrate to extend to be captured to extend to extend to extend to the captured to th
													6.66 to 32.49 inhip 300.0 to 1100.0 hPaimbe	0.30 to 48.87 hHg 10.0 to 1654.7	More lithic sticon piezorosistive pressure sensor with second-order temperature connection. Pressure sensor may be recalizated at factory or in Raid. Adjustable reference at buildo all
	٠		•	٠	•	9		•	•	•	03 inHg 1.0 hPalmbar 0.01 PSI	0.01 lnHg 0.1 hPolymbar 0.01 PS	4.35 to 15.95 PS1 and 32.9 to 185.9 °F 0.0 to 85.0 °C	hPajmbar 0,64 to 24.00 PSt and 14.9 to 131.0 °F -10.6 to 55.0 °C	display of station pressure or barceretriz pressure connected to MSE. Keater (ACC display either presenter on a dedicate accent, Network 1000 and 35CC display cent accessive pressure are about the pressure of the pressure trend interest in the pressure trend through graphing function, PSI clause (Societ (ACC control of the PSI).
											. 5*	1" 1/16th Cordinal	0 to 360°	□ le 360°	2-axis solid-state magnetoredistive sensor mounted perpendicular to until plane. Accuracy sensor departions upon units vertical position. Self-calibration routine elimin sice magnetic error from battarios or tinit and must be true offer every full power-down (cottery remaind of
	enero-s		versoone	e es e se se	n norman	uouo-	est principe	*******			· · · · · · · · · · · · · · · · · · ·	Scalo		person and the second s	change). Readout indicates direction to which the back of the unit is pointed when held in vertical orientation. De chalips/yoristion adjustable for Trus North readout.
2000	2590	3000	3600	3500	4000	4200	4250	4300	4500	ALCU	LATED MEA	SUREME RESOLUTION	N IS SPECIFICATION RANGE	SENSORS EMPLOYED	NOTES
				ы			,				0.0002 RAT <sup>2</sup> 0.0033 kg/m <sup>2</sup>	0.001 lbs/ft <sup>6</sup> 0.904 kg/m <sup>2</sup>	Refer to Flanges for Consort Employed	Temperature Relative Humoty	Moss of sit per unit volume
											-	Tishn Timbe	Notes to Rendes for	Pressure Air Flow	Volume of air flowing through an opening. Automatically colouisted from Air Volocity
						•					0,0671	1 m²/m 0.1 m²/s 1 L/s	Sensors Employed	User Input (Duet Shape & Size)	measurement and user-specified duct shape [circle or rectangle) and dimensions (units: it, orner m). Maximum duct dimension input: 288.0 in (21.8 %) 865.3 cm   6.55 m.
				•				۰			· typical: 23,6 ft 7.2 m max: 46,2 €	s it f m	typical; 750 ki 1100 mBar	Prossuro Usar i pput (Referenci Prossuro)	assurably, Both aboutsey apoets corresponds to a seturation pressura anywhere from soul
					,						0.07 loHg 2.4 hPolmbar	0.01 kiHg 0.1 hPolysbar	max: 366 to 750 mBar Roler to Rangos for	Pressure	1100 mBBs. Air pressure that would be present in identical conditions at MBL. Station presource compensated for it call plevation provided by reference attitude. Requires accurate referen
									•		0.03 PSI	0.01 PSi temph 1 Effection 0.1 km/sh	Sensors Employed  Relea to Ranges for  Sensors Employed	Atthine) West Speed Compass	attiade to produce maximum ebsolute accuracy.  Effective wind relative to a larget or travel direction. Autorswitching headwindfelliveled helicative.
											32°F	0,1 m/s 0,1 knots 0,1 °F	Refer to Ranges for	Temporature	Difference between dry bulb temperature and wat bulb temperature. When spraying, indi
				•							1.0 °C	0.1 °C	Sensors Employed Refer to Ranges for	Reistive Hurridity Prossure Temperature	exaposation rate and droplet tiletima. Sate range for posticide spraying is 4 to 16 °F   2 to *C.  Local air density convenied to equivalent alevalles above sea toyol in a uniform type.
					٠	٠		•	۰		59 m	1 m 0.1 %	Sensors Employed 15 to 95 % RH	Relative Humidity Pressure Temperature	consisting of the International Standard Atmosphera.  Temperature that a volume of air must be cooled to at constant pressure for the water way.
		*	•	•		a		•		•	1.9 °C	0.1 %	Rofer to Range for Temperature Sensor	Relative Humidity Wind Space	present to sonderize lists daw and form on a solid surface. Can also be considered to be water-to-air outuration temperature.
								٠			0,01 state <sup>2</sup> /mr 0.05 kg/m2/mr	0.01 brit <sup>3</sup> ste 0.01 kg/m³/hr	Refer to Ranges for Geneuro Employed	Temporature Relative Hurridity Pressure User Input (Concrete Temporature)	The late of which michigal is high from the surface of curing pomorals. Requires user necessarions of one-phy of noncolor between the relating which is sourced fill or probe their moment of (File of Co., as I included). Readings should be taken 20 includes shours pour surface with the their relation shielded, and wereged for 6-10 seconds using build-in averaging function.
		8	•		9	•		2	9		7.0°F 4.0°O	0.1 °F 0.1 °C	Refer to Ranges for Sensors Employed	Temporaluió Reletive Humidity	Perceived temperature resulting from the combined effect of temperature and relative humpidity. Calculated based on NVS Heat Index (HS tables. Measurement range limited to extend of published tealers.
•							•				.3 gpp .04 g/kg	0.1 gpp 0.01 g/kg	Refer to Ranges for Sensors Employed	Temperature Relative Humidity Pressure	Mass of water vapor in a mass of sir.
	•										0.0026	0.904	Refer to Ranges for Sensors Employed	Temporature Reletive Humidity Prescure	The raile, expressed as a percentage, of measured air density to the air density of a step aircosphere as defined by the IGAO.
								•	•		3.2 °F 18 °C	0.1 TF 0.1 °C	Refer to Ranges for Sensors Employed	Temperature Relative Humidity	Temparature indicated by a siling psychrometer. Due to nature of the psychrometric rate if water-sit system, this approximates the thermodynamic well-culb temperature. The the modynamic well-culb temperature is the foregranulure a parcel of air would have if one
														Prossura	adis batically to saturation temperature via water evaporating into £.
•	•	•	•		•	•	•	•	•	•	1.6.7F 0.9 °C	0.1 TF 0.1 TC	Refor to Ranges for Sensors Employed	Wand Speed Temperature	Parcained temperature resulting from combined effect of wind speed and temperature, Catastield tassed in the WYS WKN Chill Temperature (WXT) Index, revised 2001, with in speed adjusted by a factor of 1.5 to yield equivalent results to wind speed measured at 16 slaver ground, Measurement range limited by extent of published faither.
ation.										ADDIT	ONAL SPE	CIFICATIO	ONS	8405273	
• ;															cklight. Menual cotivation with auto-off. V modele only) electroluminescent beoklight, Manual activation with suite-off,
								•	•	•	Mutilfunction, multi-dig	i manachzome data	matrix display. Chaics of a	viaben green or visible	red (NV models only) electroluminescent backlight. Automatic or manual activation.
•		•			•			•							ond. Relative humidity and all enabetremente welch include RH in their ealeulation may requ Display applatas every 1 second.
•	•	٠											Gust and Average Wand m		
					•	•		•			headwind/tallwind, win	d chill, WBGT, TWL	avaperation reta,		ng of other values, along with all other wind-related functions: alreading, crosswind,
					4000		32DD		2900	2500 points	Minimum, maximum, a Minimawaya History et intervals feeds version	ray be reset indepor	idontly, Auto-stone interval	d for every measured : settable from 2 second	value. Large capacity data logger with graphical display. Manuel and eute data Storage. Is to 12 hours, overwoite en or off. Loga even when display off except for 2 and 5 occand
					prenti	polats	poine	. points	ports	poiss	Recures optional PC i	nterface (USB or RE	3-232) or Bluetooth data to	ansfar option and prov of radio sange from up	rided zoftware. Go 38 tr j Simelens, Individual Unt ID and 4-digil PAN code prepregrammed for easy identific
,	,			•							and data security when Roal time hours; minute	paling and transm s dock.	litting, Employs Bluetooth	Berlai Port Protecti for	deta transmission.
	÷	٠			•		٠	•	•	•	After 45 minutes of no	ray prosses.	otondar, automotic loap-ye.	er adjustmont.	
A					•		9				English, French, Germ	an Italian Spanish.	key presses or disabled.	teriornalita elameta este Ar	without coefficients of the temporal and a subdivined observed
::-		d d	•	•		•		•		•	Designed and manufact Orterior 8.	tured in the USA fro	m US and Imported comp	onorits. Compiles with	ntitan corificate of teats available at additional charge). Regional Value Content and Teriff Code Transformation recultements for NAFTA Professeo
đ	•	8	. • .	. •							CR2032, ene, includes		ours. Bettery life reduced		
	_	_	٠.		•	•		٠	•		,		oluded Average life, 460 h 6.5 Procedure IV: walt only		y backlight or fluctooth radio transmission use.
•			9		:		•		9	•	Waterproof d P07 and	NEMA-S).			replaceable trapellar.  rational temperature range of the display and batteries by maintaining the unit within the
•		a	8	a	•	•	9	8	۰		14" F to 131" F   -10 "C operational range and -22.0 "F to 140.0 "F (-	exposing it to the m	mante maly be taken beyo ava exacme environment f	or the minimum time n	receive empty along range of the display with determining managering the unit within the occessory to take reading.
•		4	•	9		-	-	•	-	•		x 4,8 x 2.8 cm, 3,6	oz / 102 g (including slip-o	n covar .	

s uncertainty of the measurement derived from statistical analysis considering the combined effects from primary sensor specifications, circuit conversions,



Appendix F

Event/Action Plan for Noise Exceedance





### **Event and Action Plan for Construction Noise Monitoring**

Event	Action										
	ET	IEC	ER	Contractor							
Action Level	<ol> <li>Carry out investigation to identify the source and cause of the complaint/ exceedance(s)</li> <li>Notify IEC, ER, and Contractor and report the results of investigation to the Contractor, ER and the IEC</li> <li>Discuss with the Contractor and IEC for remedial measures require</li> <li>If the complaint is related to the Project, conduct additional monitoring for checking mitigation effectiveness and report the findings and results to the IEC, ER and the Contractor</li> </ol>		<ol> <li>Confirm receipt of Notification of Exceedance in writing</li> <li>Require Contractor to propose remedial measures for the analysed noise problem</li> <li>Ensure remedial measures are properly implemented</li> </ol>	<ol> <li>Submit noise mitigation proposals, if required, to the IEC and ER</li> <li>Implement noise mitigation proposals.</li> </ol>							
imit Level	1. Notify IEC, ER, EPD and Contract 2. Identify the source(s) of impact by reviewing all the relevant monitor data and the corresponding construction activities. Exceedanc should also be confirmed by immediate verification in the field far as practical. 3. Repeat measurement to confirm findings 4. Increase monitoring frequency 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be impleme 6. inform IEC, ER and EPD the cause actions taken for the exceedances 7. Assess effectiveness of Contractor' remedial actions and keep IEC, EF ER informed of the results 8. If exceedance stops, cease addition monitoring.	Contractor on the potential remedial actions  2. Review Contractor's remedial actions to assure their effectiveness and advise the ER &ET accordingly  3. Supervise the implementation of the remedial measures  ated.  &	1. Confirm receipt of notification of exceedance in writing 2. Notify Contractor 3. Require Contractor to propose remedial measures for the analyzed noise problem 4. Ensure remedial measures are properly implemented 5. If exceedance continuous, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is aborted	Take immediate action to avoid further exceedance     Identify practicable measures to minimize the noise impact. Submit proposals for remedial actions to ER within three working days of notification     Implement the agreed proposals     Resubmit proposal if problem still not under control     Stop the relevant portion of works as determined by the ER until the exceedance is abated							



# Appendix G

**Noise Monitoring Data** 



					Leq-5min	, dB(A)			I I 20 .		L <sub>90</sub> 30 <sub>mins</sub>	Limit	
Date	Time	Weather	Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)	L <sub>eq-30min</sub> , dB(A)	dB(A)	AD(A)	Level, dB(A)*	Noise Meter
01/12/2021	11:46 - 12:16	sunny	66	64.6	65.2	67.0	68.1	69.5	67.1	70.8	56.7	70.0	XL2 A2A- 13661-E0
08/12/2021	15:18 - 15:48	sunny	65.5	69.4	68.0	68.9	66.8	68.8	68.1	72.0	59.8	70.0	XL2 A2A- 17638-E0
17/12/2021	14:10 - 14:40	cloudy	68.3	67.0	66.5	68.6	65.6	66.9	67.3	70.7	59.1	70.0	XL2 A2A- 17638-E0
21/12/2021	16:00 - 16:30	cloudy	68.2	67.9	66.8	65.5	66.1	67.8	67.2	70.9	58.9	70.0	Svantek 96062
31/12/2021	12:56 - 13:26	cloudy	68.7	67.7	65.6	64.9	67.5	67.2	67.1	71.0	58.4	70.0	XL2 A2A- 17638-E0

Remarks:

<sup>\*</sup>No examinations were scheduled for NSR4 Creative Secondary School in the reporting month. Academic School Calendar can be found in Appendix O.



Appendix H

**Waste Flow Table** 



**Monthly Summary Waste Flow Table** 

Name of Department: WSD Contract No. / Works Order No.: 13/WSD/16

**Monthly Summary Waste Flow Table for <u>December 2021</u>** 

		Actual Quantities o	f <u>Inert</u> Construction Wa	ste Generated Mo	onthly	
Month	Total Quantity Generated (see Note 4)	Hard Rock and Large Broken Concrete (see Note 3)	Reused in the Contract	Reused in other Projects	Disposed of as Public Fill	Imported Fill (see Note 1)
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )
2018	1.157	0.063	0.000	0.000	1.157	0.518
2019	5.178	0.043	2.211	0.000	2.520	3.200
2020	13.173	1.506	0.291	0.000	12.878	1.323
Jan 2021	2.438	0.120	0.000	0.000	2.438	0.127
Feb-2021	1.702	0.224	0.000	0.000	1.702	0.537
Mar-2021	2.780	0.163	0.000	0.000	2.780	1.361
Apr-2021	2.338	0.271	0.222	0.000	2.116	0.629
May-2021	2.265	0.125	0.360	0.000	1.906	0.340
Jun-2021	2.017	0.135	0.221	0.000	1.796	1.148
Jul-2021	2.003	0.059	0.109	0.000	1.894	1.352
Aug-2021	1.223	0.026	0.455	0.000	1.223	0.590
Sep-2021	2.584	0.097	0.911	0.000	1.673	0.746
Oct-2021	1.857	0.060	0.252	0.000	1.605	0.653
Nov-2021	2.127	0.099	0.000	0.000	1.950	0.177
Dec-2021	1.050	0.100	0.052	0.000	0.998	0.739
Total for 2021	24.384	1.479	2.582	0.000	22.081	8.399



		Actual Quantities of	Non-inert Constructio	n Waste Generated Mo	nthly	
Month	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. General Refuse disposed at Landfill	
	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )	
2018	0.000	0.417	0.000	0.000	0.139	
2019	0.000	0.062	0.000	0.000	0.102	
2020	0.000	0.606	0.000	0.000	0.043	
Jan 2021	0.000	0.065	0.000	0.000	0.006	
Feb-2021	0.000	0.058	0.000	0.000	0.012	
Mar-2021	0.000	0.055	0.000	0.000	0.002	
Apr-2021	0.000	0.045	0.000	0.000	0.008	
May-2021	0.000	0.049	0.000	0.000	0.006	
Jun-2021	0.000	0.051	0.000	0.000	0.000	
Jul-2021	0.000	0.052	0.000	0.000	0.005	
Aug-2021	0.000	0.048	0.000	0.000	0.000	
Sep-2021	0.000	0.037	0.000	0.000	0.002	
Oct-2021	0.000	0.042	0.000	0.000	0.002	
Nov-2021	0.000	0.050	0.000	0.000	0.001	
Dec-2021	0.000	0.048	0.000	0.000	0.002	
Total for 2021	0.000	0.600	0.000	0.000	0.046	

#### Notes:

- 1. The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- 2. Plastic refer to plastic bottles/containers, plastic sheets/foam from packaging materials.
- 3. Broken concrete for recycling into aggregate.



- 4. "Total Quantity Generated" only refers to the actual quantities of inert C&D materials generated monthly excluding those that will be recycled (Hard Rock and Large Broken Concrete, Reused in the Contract, Reused in other Projects). Imported fill will not be included in "Total Quantity Generated" as those C&D materials are not generated from this project.
- 5. C&D materials in tonnes are converted to meter cube (m³) on a scale of 0.5.
- 6. Source and types of Imported Fill in the reporting month
  - i. K. Wah Quarry Company Limited: (Soil) 708.14 m<sup>3</sup> (1416 tonnes/24 cars)
  - ii. K. Wah Quarry Company Limited: (Sub-base) 30.96 m<sup>3</sup> (62 tonnes/1 car)

7. Hard Rock and Large Broken Concrete are disposed to public fill, the breakdown of C&D materials disposed to public fill is shown as below:

Type of C&D Materials	Description of C&D Materials	C&D Waste Disposed (Volume) (m³)
	Bentonite	0.00
	Broken Concrete	46.80
	Broken Rock	53.35
	Mixed Construction Waste (>50% inert)	4.25
Inort	Building Debris	0.00
Inert	Mixed Rock and Soil	682.45
	Reclaimed Asphalt Pavement	49.75
	Slurry	53.40
	Soil	108.35
	TOTAL =	998.35
Non-inert	TOTAL =	2.65



# Appendix I

Landfill Gas Monitoring Equipment Calibration Certificate





香港新界葵涌葵昌路58-70 號永祥工業大廈10樓B室 Unit B, 10/F., Wing Cheung Industrial Building, 58-70 Kwai Cheong Road, Kwai Chung, New Territories, HK Tel: (852) 2751 7770 Fax: (852) 2756 2051 B-mail: rotter@rotter.com.hk

#### Calibration Report - Gas Detector

- Canadan Roport Gdo Botoctor							
PGM-2500 (QRAÊ III) LEL/O2/CO/H2S							
-							
LIMIT IMPODAÇA	10N -						
UNIT INFORMAT	ION:						
Customer: Penta Oce	an Construction Co Ltd	Serial #: M02A0		QRAE III			
		Firmware : V2.		LEL/O2/CO/H2S			
		Cal date : 28-Jul-	2021 Inspected:	Leddy			
SENSOR DATA :			٠				
SENSOR DATA .	1 = 1 (1 4 = 1	70	00 / / /	1100			
Calibration dates:	LEL sensor (ME) 28-Jul-2021	<u>O2 sensor</u> 28-Jul-2021	CO sensor (Tox1) 28-Jul-2021	H2S sensor (Tox2) 28-Jul-2021			
After Calibration levels		17,90%	50 ppm	10.1 ppm			
Alarm levels (Low):	10.00%	19.50%	35 ppm	10 ppm			
Alarm levels (High):	20.00%	23.50%	200 ppm	20 ppm			
TWA Level; STEL Level:			35 ppm 100 ppm	10 ppm 15 ppm			
STEL Level:			100 ppm	19 bbtit			
Status:			.1	•			
Pump Speed	Low	Back Light	Manual				
Glock	Yes	Measure.	Average				
LEL Gas Selection				. '			
LEL Calibration Gas	LEL Calibration Gas Methane		Methane				
LEL Custom Gas LEL_custom_gas		LEL measurement Gas LEL Custom Factor	1.0				
Gas types used : 4-G	as Mix: (18% O2, 50ppm C	CO, 10ppm H2S, 50% LE	L CH4, BAL N2)	Gas lot #1412983 Cyl# 15			
*** Fresh Air Calibrat	ion is highly recommended	to proceed prior for mea	surement each time.				
Replaced Parts:							
Notes:							
	and checked under good	working condition		•			
		***************************************		. ,			
**Next calibration duev	on or before 27 July 2022						
Serviced by Tedds	E) S) (Wong						
	rnational Ltd						



# Honeywell Protection Through Detection 1349 Moffett Park Drive,

1349 Moffett Park Drive, Sunnyvale, CA 94089 USA Main: 408-952-8200

www.raesystems.com

### Calibration and Test Certificate

Product Name:

MultiRAE Lite

Model Number:

PGM-6208

Serial Number:

M01C031772

Calibration/Inspection Date:

6/4/2021

#### Calibration Gases:

#	Gas	Concentration	Balance	Lot#
1	Hydrogen Sulfide(H2S)	10ppm		
2	Carbon Monoxide( CO )	50ppm	Nitrogen( N2)	20210508
3	Oxygen(O <sub>2</sub> )	18%		
4	Methane( CH, )	50%LEL		
5	Sulfur Dioxide(SO <sub>2</sub> )	5ppm	Nitrogen(N2)	20210114
6	Carbon Dioxide(CO2)	5000ppm	Nitrogen( N2)	20201203

#### Test Results:

#	Sensor	Span	UOM
1	LEL	51	%LEL
2	SO <sub>2</sub>	5.2	ppm
3	COSH (H2S / CO)	10.1 / 51	ppm
4	Pb O,	17.8	. %
5	CO <sub>2</sub>	4900	ppm

This instrument has been calibrated using valid calibration gases and instrument manual operation procedures. Test and calibration data is on file with the manufacturer, RAE Systems.

Approved By:

36-05-51832593

ISO 9001 CERTIFIED



Appendix J

**Landfill Gas Monitoring Data** 



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021
	<u></u>

Sample location			Monitoring wells / Surface Gas Emission						
	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	1/12/2021	0830	Fine / Bain	0	0	0	20.9	16/1012	5.5
		1330	Fine / Batin	0	0	0	20.9	18/1011	5.5
		1700	Fine / Rain	0	0	0	20.9	17/1012	5.5
Area B	1/12/2021	0845	Fine / Bain	0	0	0	20.9	17/1/011	2.5
-		1345	Fine / Batin	0	0	0	20.9	18//017	2.5
		1645	Fine / Rain	0	0	0	20.9	18/192	2.5
					<u>_</u>				

Name & Designation

Signature

Date

Field Operator:

Dash Ip (Safety Office [Renopipe])

Ċ7

1/12/200

Laboratory Staff:

翟偉傑

1/12/202

Checked by:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

		Sampling time	Monitoring wells / Surface Gas Emission						
Sample location	Date of measurement		Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	2/12/2021	0830	Fine / Rain	0	0	0	20.9	16/1012	5.5
		1330	Fine / Rain	0	0	0	20.9	17/1011	5.5
•		1700	Fine / Rain	0	0	0	20.9	18/101	5.5
Area B	2/12/2021	0845	Fine / Rain	0	0	0	20.9	17/1011	2.5
		1345	Fine / Bain	0	0	0	20.9	20/1013.	2.5
		1645	Fine / Rain	0	0	0	20.9	18/1011	2.5
						i			

Name & Designation

<u>Date</u>

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:

Checked by:

置偉傑 PSO (POCTV)

2/12/202/



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

					Monitoring well	s / Surface G	as Emissic	on	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	3/12/2021	0830	Fine / Rain	0	0	0	20.9	16/1012	5.5
		1330	Fine / Rai <del>n</del>	0	0	0	20.9	18/10.3	5.5
		1700	Fine / Bain	0	0	0	20.9	18/1013.	5.5
Area B	3/12/2021	0845	Fine / Rain	0	0	0	20.9	17/1011	2.5
		1345	Fine / Bain	0	0	0	20.9	19/1010	2.5
		1645	Fine / Rain	0	0	0	20.9	18 (1017	2.5
								(5)	

Name & Designation

<u>Signature</u>

<u>Date</u>

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Dates calibrated Sampling equipment used: PGM-2500P (QRAE III) 28 JUL 2021

			Monitoring wells / Surface Gas Emission					n	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	4/12/2021	0830	Fine / Rain	0	0	0	20.9	16/1/512	5.5
		1330	Fine / Bain	0	0	0	20.9	18/1011	5.5
	1	1700	Fine / Rain	0	0	0	20.9	18/1011	5.5
Area B	4/17 /2021	0845	Fine / Rain	0	0	0	20.9	17/1012	2.5
		1345	Fine / Bain	0	0	0	20.9	19/1011	2.5
		1645	Fine / Rain	0	0	0	20.9	19/1011	2.5
			·						

Name & Designation

Signature

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:

翟偉傑 RSO (POCJV)

4/12/2021



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated				
PGM-2500P (QRAE III)	28 JUL 2021				

					Monitoring well:	s / Surface G	as Emissic	n	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	6/12/12/24	0830	Fine / Rain	0	0	0	20.9	18/1011	5.5
		1330	Fine / Rain	0	0	0	20.9	20/1012	5.5
		1700	Fine / Rain	0	_ 0	0	20.9	20 (1012	5.5
Area B	6/12/2021	0845	Fine / Rain	0	0	0	20.9	18/1010	2.5
	3.	1345	Fine / Rain	0	0	0	20.9	19/1011	2.5
		1645	Fine / Rain	0	0	0	20.9	20/1011	2.5

Name & Designation

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:

Checked by:

Signature



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

			Monitoring wells / Surface Gas Emission							
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
Area A	7/12/2021	0830	Fine / Rafin	0	0	0	20.9	19/1011	5.5	
		1330	Fine / Barin	0	0	0	20.9	20//012	5.5	
		1700	Fine / Bain	0	0	0	20.9	20//012	5.5	
Area B	7/12/2021	0845	Fine / Barin	0	0	0	20.9	18/1011	2.5	
		1345	Fine / Rain	0	0	0	20.9	20/1012	2.5	
		1645	Fine / Rain	0	0	0	20.9	20/1012		
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Name & Designation

Signature

Date

Field Operator:

Dash Ip (Safety Office [Renopipe])

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7/12/2021

Laboratory Staff:

Checked by:

星停傑 RSO / POCTV

7/12/202



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O Date of measurement:

PGM-2500P (QRAE III) 28 JUL 2021
eung Kwan O

Sampling equipment used:

	Γ Γ		Monitoring wells / Surface Gas Emission							
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
Area A	8/17/2021	0830	Fine / Bairr	0	0	0	20.9	20/1011	5.5	
	11777202	1330	Fine / Rain	0	0	0	20.9	21/1012	5.5	
		1700	Fine / Rain	0	0	0	20.9	21/1012	5.5	
Area B	8/12/2021	0845	Fine / Rain	0	0	0	20.9	19/1010	2.5	
	U 17 1229.27	1345	Fine / Rain	0	0	0	20.9	21/1011	2.5	
		1645	Fine / Rain	0	0	0	20.9	21/1011	2.5	
	1	· · · · · · · · · · · · · · · · · · ·			T					

Name & Designation

Signature

<u>Date</u>

Field Operator:

Dash Ip (Safety Office [Renopipe])

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Dates calibrated

Laboratory Staff:

Checked by:

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8/12/202/



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

					Monitoring wells	s / Surface G	as Emissio	on	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	9/12/2021	0830	Fine / Bain	0	0	0	20.9	19/1011	5.5
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1330	Fine / Ratin	0	0	0	20.9	21//012	5.5
		1700	Fine / Rain	0	0	0	20.9	21/1012	5.5
Area B	9/12/2021	0845	Fine / Bain	0	0	0	20.9	20/1010	
7-7-		1345	Fine / Bain	0	0	0	20.9	21/1011	2.5
		1645	Fine / Bain	0	0	0	20.9	21/121	2.5
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Name & Designation

Signature

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Date of measurement:

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Dates calibrated
28 JUL 2021

Monitoring wells / Surface Gas Emission Temp (°C) / Carbon Date of Remark Sample location Sampling time Weather Balance Flammable gas Oxygen monoxide( Pressure measurement Depth (m) gas (%) (methame %) (%) condition (mbar) %) 0 0 0 20.9 5.5 0830 Fine / Rain Area A 10/12/2021 20/100 0 0 5.5 0 20.9 1330 Fine / Rain 21/00 Fine / Rain 0 0 0 20.9 5.5 1700 2.5 0 0 0 20.9 10/12/2011 0845 Fine / Bain Area B 2.5 0 20.9 21/1011 1345 Fine / Raim 0 0 0 0 0 20.9 2.5 1645 Fine / Rain 21/1011

Name & Designation

Signature

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

					Monitoring well:	s / Surface G	as Emissic	on .	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	11/12/22)	0830	Fine / Barin	0	0	0	20.9	21/1012	5.5
		1330	Fine / Bain	0	0	0	20.9	21/100	5.5
		1700	Fine / Rain	0	0	0	20.9	7111012	5.5
Area B	11/12/2021	0845	Fine / Rain	0	0	0	20.9	21/1011	2.5
		1345	Fine / Bain	0	0	0	20.9	23/1011	2.5
		1645	Fine / Rain	0	0	0	20.9	23 11012	2.5
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<u>Signature</u>

<u>Date</u>

Field Operator:

Dash Ip (Safety Office [Renopipe])

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Laboratory Staff:

Checked by:

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傑 RSO / pocJV

11/12/2021



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

					Monitoring wells	s / Surface G	as Emissic	n	, .
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	13/12/2021	0830	Fine / Rain	0	0	0	20.9	19/1011	5.5
	( ) ) ( ) ( )	1330	Fine / Rafin	0	0	0	20.9	21/1012	5.5
	· .	1700	Fine / Bath	0	0	0	20.9	21/1012	5.5
Area B	13/12/2021	0845	Fine / Rain	0	0	0	20.9	2011010	2.5
		1345	Fine / Raim	0	0	0	20.9	21/1011	2.5
		1645	Fine / Rain	0	0	0	20.9	21/1011	2.5
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Name & Designation

Signature

<u>Date</u>

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:

Checked by:

13/12/202/



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated		
PGM-2500P (QRAE III)	28 JUL 2021		

<del></del>	ļ				Monitoring well	s / Surface G	as Emissio	n	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	14/12-12021	0830	Fine / Rain	0	0	0	20.9	20/1012	5.5
	1111111	1330	Fine / Rain	0	0	0	20.9	21/1011	5.5
		1700	Fine / Rain	0	0	0	20.9	21/100	5.5
Area B	14/12/2021	0845	Fine / Bain	0	0	0	20.9	19/1011	2.5
		1345	Fine / Rain	0	0	0	20.9	20/1012	2.5
	,	1645	Fine / Rain	0	0	0	20.9	20/1012	2.5
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Name & Designation

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:

Field Operator:

Checked by:

Signature

Date

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Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated		
PGM-2500P (QRAE III)	28 JUL 2021		
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		A				Monitoring well:	s / Surface G	as Emissio	n	
Sample location	Date of measurement	Sampling time	Wea		Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Агеа А	15/12/2021	0830	Fine /	/ Rain	0	0	0	20.9	21/10/2	5.5
1 144	77777	1330	Fine /	Bain	0	0	0	20.9	22/1011	5.5
		1700	Fine ,	Rain	0	0	0	20.9	22/10(1	5.5
Area B	15/12/2021	0845	Fine ,	Rein	0	0	0	20.9	20/1910	2.5
-/		1345	Fine ,	Bain	0	0	0	20.9	21/1011	2.5
		1645	Fine ,	/ Rain	0	0	0	20.9	21/1011	2.5
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	•									
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Name & Designation

Signature

<u>Date</u>

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated		
PGM-2500P (QRAE III)	28 JUL 2021		
- Control of the Cont			

					Monitoring well	s / Surface G	as Emissic	n	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	16/12/201	0830	Fine / Bain	0	0	0	20.9	23/10(1	5.5
		1330	Fine / Bain	0	0	0	20.9	23/1012	5.5
		1700	Fine / Rain	0	0	0	20.9	23 (10)12.	5.5
Area B	16/17/17021	0845	Fine / Bain	0	0	0	20.9	27/1011	2.5
		1345	Fine / Bain	0	0	0	20.9	24/1012	2.5
		1645	Fine / Rain	0	0	0	20.9	23/1011	2.5
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Name & Designation

Signature

Field Operator:

Checked by:

Dash Ip (Safety Office (Renopipe))

Laboratory Staff:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated		
PGM-2500P (QRAE III)	28 JUL 2021		
	-		

					Monitoring well	s / Surface G	as Emissic	n	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	17/12/2021	0830	Fine / Rain	0	0	0	20.9	20/1010	5.5
		1330	Fine / Bain	0	0	0	20.9	21/1011	5.5
		1700	Fine / Bain	0	0	0	20.9	20 /1011	5.5
Area B	17/12/2021	0845	Fine / Bain	0	0	0	20.9	19/10/2.	2.5
W-W		1345	Fine / Bain	0	0	0	20.9	21/1011	2.5
		1645	Fine / Raim	0	0	0	20.9	21/1911	2.5
		<u>.</u>							-
			-						<u> </u>

Name & Designation

Signature

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

					Monitoring well	s / Surface G	as Emissic	on	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxγgen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	18/12/2021	0830	Fine / Rain	0	0	0	20.9	17/1010.	5.5
		1330	Fine / Rain	0	0	0	20.9	19/1011	5.5
<del>-1*****</del>		1700	Fine / Ratin	0	0	0	20.9	19/1011	5.5
Area B	18/12/2021	0845	Fine / Bain	0	0	0	20.9	17/1009	2.5
		1345	Fine / Rain	0	0	0	20.9	18/1010.	2.5
		1645	Fine / Rain	0	0	0	20.9	18/10:0	2.5
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Name & Designation

Signature

Field Operator:

Dash Ip (Safety Office [Renopipe])

18/12/2021

Laboratory Staff:

Checked by:

翟偉傑 RSO (pocJV)



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated				
PGM-2500P (QRAE III)	28 JUL 2021				

					Monitoring well:	/ Surface G	as Emissic	n	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	20/12/2021	0830	Fine / Rain	0	0	0	20.9	17/1009	5.5
		1330	Fire / Rain	0	0	0	20.9	18/10/0	5.5
		1700	Fine / Rain	0	0	0	20.9	18/1010	5.5
Area B	20/12/2021	0845	Firm€ / Rain	0	0	0	20.9	17/1010	2.5
		1345	Eirné / Rain	0	0	0	20.9	19/1011	2.5
		1645	Fine / Rain	0	0	0	20.9	19/1011	2.5

Name & Designation

Signature

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:

程停條 RSO - POCTV



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated		
PGM-2500P (QRAE III)	28 JUL 2021		

					Monitoring well:	s / Surface G	as Emissic	on	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	21/12/2021	0830	Fine / Berin	0	0	0	20.9	121/002,	5.5
		1330	Fine / Baim	0	0	0	20.9	19/1010	5.5
		1700	Fine / Rain	0	0	0	20.9	19/1010.	5.5
Area B	21/12/201	0845	Fine / Rain	0	0	0	20.9	18/1010.	2.5
		1345	Fine / Rain-	0	0	0	20.9	19/1010	2.5
		1645	Fine / Rain	0	0	0	20.9	19/1010.	2.5
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Name & Designation

Signature

<u>Date</u>

Field Operator:

Dash Ip (Safety Office [Renopipe])

21/12/2021

Laboratory Staff:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated			
PGM-2500P (QRAE III)	28 JUL 2021			

					Monitoring well:	s / Surface G	as Emîssic	on	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	22/12/2021	0830	Fine / Bain	0	0	0	20.9	1811009	5.5
		1330	Fine / Bain	0	0	0	20.9	201/010	5.5
		1700	Fine / Rain	0	0	0	20.9	20/1010	5.5
Area B	22/12/2021	0845	Fine / Rain_	0	0	0	20.9	19/1007	2.5
		1345	Fine / Rain	0	0	0	20.9	20/1009	2.5
		1645	Fine / Bain	0	0	0	20.9	21/1010.	2.5
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Name & Designation

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

					Monitoring well:	s / Surface G	as Emissic	n	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	23/12/2021	0830	Fine / Rain	0	0	0	20.9	19/1009.	5.5
		1330	Fine / Bain	0	0	0	20.9	20/1010	5.5
		1700	Fine / Rain	0	0	0	20.9	20/1010	5.5
Area B	23/12!2021	0845	Fine / Rain	0	0	0	20.9	20/103	2.5
		1345	Fine / Rain	0	0	0	20.9	2/1/010	2.5
		1645	Fine / Bein	0	0	0	20.9	21/1010.	2.5

Name & Designation

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Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Dates calibrated
28 JUL 2021

					Monitoring well:	s / Surface G	as Emissic	n	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	24/12/2021	0830	_Eime / Rain	0	0	0	20.9	19/1010.	5.5
		1330	Fine / Batn	0	0	0	20.9	20/1011	5.5
		1700	Fine / Bain	0	0	0	20.9	20/1011	5.5
Area B	2411712021	0845	Fine / Rain	0	0	0	20.9	19/1010	2.5
		1345	Fine / Rain	0	0	0	20.9	19/1010	2.5
		1645	Fine / Bain	0	0	0	20.9	20/1011	2.5
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Name & Designation

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:

Field Operator:

Checked by:

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Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated			
PGM-2500P (QRAE III)	28 JUL 2021			

					Monitoring wells	s / Surface G	as Emissic	n	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	28/12/2021	0830	Fine / Bain	0	0	0	20.9	1411009.	5.5
··		1330	Fine / Bain	0	0	0	20.9	16/1010	5.5
		1700	Fine / Rain	0	0	0	20.9	16/1010.	5.5
Area B	28/12/2021	0845	Fine / Rain	0	0	0	20.9	15/1010	2.5
		1345	Fine / Barin	0	0	0	20.9	17/1011	2.5
		1645	Fine / Rain	0	0	0	20.9	17/1011	2.5
		······				•			

Name & Designation

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:

Checked by:

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Date

28/12/202

28/12/2021



Contract no. 13/WSD/16
Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated		
PGM-2500P (QRAE III)	28 JUL 2021		

					Monitoring well	s / Surface G	as Emissic	n	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	29/12/2021	0830	Fine / Bain	0	0	0	20.9	17/1010	5.5
		1330	Fine / Rain	0	0	0	20.9	20/1009	5.5
	1.0.1111	1700	Fine / Rain	0	0	0	20.9	20/1009.	5.5
Area B	29/12/201	0845	Fine / Rain	0	0	0	20.9	18/1009	2.5
		1345	Fine / Rain	0	0	0	20.9	9/2010	2.5
		1645	Fine / Rain	0	0	0	20.9	19/1010	2.5
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Name & Designation

Date

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:

Checked by:

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Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated		
PGM-2500P (QRAE III)	28 JUL 2021		

		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			Monitoring well	s / Surface G	as Emissic	on	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( _%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Area A	30/12/2021	0830	Fine / Rain	0	0	0	20.9	18/1010	5.5
<del>\</del>		1330	Fine / Bain	0	0	0	20.9	1911011	5.5
		1700	Fine / Raim	0	0	0	20.9	19/1011	5.5
Area B	30/12/2021	0845	Fine / Pain	0	0	0	20.9	17/1009	2.5
		1345	Fine / Rain	0	0	0	20.9	19 11010	2.5
		1645	Fine / Rain	0	0	0	20.9	19/1010	
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Name & Designation

Signature

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:

Checked by:

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Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated			
PGM-2500P (QRAE III)	28 JUL 2021			

					Monitoring well	s / Surface G	as Emissic	on	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	(mbar)	Remark Depth (m)
Area A	3//12/2021	0830	Fine / Rain	0	0	0	20.9	18/1008	5.5
		1330	Fine / Rain	0	0	0	20.9	19/1009	5.5
		1530	Fine / Rain	0 _	0	0	20.9	19/1009	5.5
Area B	31/12/2021	0845	Fine / Rain	0	0	0	20.9	18/1009.	2.5
	1	1345	Fine / Bain	0	0	0	20.9	19/1010	2.5
		1530	Fine / Bain	0	0	0	20.9	19/1010	2.5
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Name & Designation

Signature

Field Operator:

Dash Ip (Safety Office [Renopipe])

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Laboratory Staff:

Checked by:

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Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated		
PGM-2500P (QRAE III)	28 JUL 2021		

		11			Monitoring well	s / Surface G	as Emissic	n	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 2	1/12/2021	0845	Fine / Bain	0	0	0	Pac	16/101	3.8
		1345	Fine / Raim	0	0	0	20.9	1811011	3.8
		1645	Fine / Raim	0	0	0	209	1811011	3.8
WPRTTA 3	1/17-12021	0845	Fine / Bain	0	0	0	20.9	17/1/010	4.3
		1345	Fine / Bain	0	0	0	20.9	19/1012	4.3
		1645	Fine / Bain	0	0	0	209	19/1012.	4.3
WPRTTA 4	1/12/201	0845	Fine / Bain	0	0	0	20.9	16/1011	4
		1345	Fine / Rain	0	0	0	203	17/1012	4
		1645	Fine / Rain	0	0	O	20.9	17/1011.	4
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Name & Designation

Signature

Date

Field Operator:

Dash Ip (Safety Office [Renopipe])

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Laboratory Staff:

Checked by:

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Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

					Monitoring well:	s / Surface G	as Emissic	n	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 2	2/12/12021	0845	Fine / Bain	0	0	0	20.9	16/1009	3.8
		1345	Fine / Rain	0	0	0	20.9	18/10U	3.8
		1645	Fine / Bain	0	0	0	20.5	1817011	3.8
WPRTTA 3	2/12/2021	0845	Fine / Bain	0	0	0	2009	17/10/0	4.3
	,	1345	Fine / Batin	0	0	0	20.9	18/1010	4.3
		1645	Fine / Bath	0	0	0	20.9	19/1011	4.3
WPRTTA 4	2/12/2021	0845	Fine / Rain	0	0	0	20.9	17/1009	4
		1345	Fine / Ratin	0	0	0	20.9	19/1010.	4
		1645	Fine / Barin	0	0	0	20.5	20/1011	4
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Name & Designation

<u>Signature</u>

<u>Date</u>

Field Operator:

Dash Ip (Safety Office [Renopipe])

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Laboratory Staff:

Checked by:

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Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

					Monitoring wells	s / Surface G	as Emissic	n	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 2	3/12/2021	0845	Fine / Ratin	0	o	0	20.9	16/1011	3.8
	·	1345	Fine / Bain	0	0	0	20.9	18/1012	3.8
		1645	Fine / Rain	0	0	0	اک تھے2	19/1012	3.8
WPRTTA 3	3/17/2021	0845	Fine / Rain	0	0	0	20.3	17/1011	4.3
		1345	Fine / Rain	0	0	0	20°	19/10/2	4.3
-		1645	Fine / Bain	0	0	0	20.5	1911011	4.3
WPRTTA 4	3/12/2021	0845	Fine / Rain	0	0	0	20 9	16/1011	4
		1345	Fine / Raim	0	0	0	28.9	1811010	4
		1645	Fine / Raim	0	0	0	20.9	18/1010	4
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Name & Designation

<u>Signature</u>

<u>Date</u>

Field Operator:

Dash Ip (Safety Office [Renopipe])

3/12/202

Laboratory Staff:

Checked by:

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Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

			Monitoring wells / Surface Gas Emission								
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
WPRTTA 2	4/12/2021	0845	Fine / Bain	0	0	0	20.9	17/1011	3.8		
		1345	Fine / Rain	0	0	0	20.9	19/10:2	3.8		
		1645	Fine / Rain	0	0	0	20.9	19/1012	3.8		
WPRTTA 3	4/12/2021	0845	Fine / Bain	0	0	0	200	16/1010	4.3		
		1345	Fine / Barin	0	0	0	2a.9	17/1011	4.3		
		1645	Fine / Rain	0	0	0	20.9	17/1011	4.3		
WPRTTA 4	4/12/2021	0845	Fine / Bain	0	0	0	20.9	17/1012	4		
	'	1345	Fine / Rain	0	0	0	20.9	19/1011	4		
		1645	Fine / Rajn	0	0	0	20.9	19/100	4		
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Name & Designation

<u>Signature</u>

<u>Date</u>

Field Operator:

Dash Ip (Safety Office [Renopipe])

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Laboratory Staff:

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Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

		•	Monitoring wells / Surface Gas Emission								
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
WPRTTA 2	6/12/2021	0845	Fine / Bain	0	0	0	20.9	1811011	3.8		
	, ,	1345	Fine / Rain	0	0	0	205	19/10/1	3.8		
		1645	Fine / Bain	0	0	0	208	2011012	3.8		
WPRTTA 3	6/12/2021	0845	Fine / Ram	0	0	0	26 4	17/10/0	4.3		
	0, ,	1345	Fine / Rain	0	0	0	20.9	19/1011	4.3		
		1645	Fine / Bain	0	0	0	20.9	191/011	4.3		
WPRTTA 4	6/12/2021	0845	Fine / Rain	0	0	0	205	18/1012	4		
		1345	Fine / Rain	0	0	0	209	19/1011	4		
		1645	Fine / Bain	0	0	0	209	19/1011	4		
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Name & Designation

Signature

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated				
PGM-2500P (QRAE III)	28 JUL 2021				

					Monitoring well:	s / Surface G	as Emissio	on	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 2	7/17 / 2021	0845	Fine / Bain	0	0	0	20.9	18110il	3.8
		1345	Fine / Balin	0	0	0	20.9	19/1016	3.8
		1645	Fine / Barn	0	0	0	20.9	20/1012	3.8
W₽RTTA 3	7/12/2021	0845	Fine / Bain	0	0	0	20.7	17/1010.	4.3
	• .	1345	Fine / Rain	0	0	0	20.9	19/1011	4.3
		1645	Fine / Bain	0	0	0	20.9	19/10N	4.3
WPRTTA 4	7/12/1 2021	0845	Fine / Rain	0	0	0	20.9	18/1012	4
	, i	1345	Fine / Barn	0	0	0	20.9	19/101	4
		1645	Fine / Rain	0	0	0	20.9	19/1011	4
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Name & Designation

Signature

<u>Date</u>

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated				
PGM-2500P (QRAE III)	28 JUL 2021				
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					Monitoring well	s / Surface G	as Emissio	n	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 2	8/12/2021	0845	Fine / Bain	0	0	0	20.9	20/1011	3.8
	9 (25:200	1345	Fine / Barin	0	0	0	703	21/1012	3.8
		1645	Fine / Bain	0	0	0	20.9	21/1012	3.8
WPRTTA 3 & ()	8/12/2021	0845	Fine / Rain	0	0	0	20.9	19/1010	4.3
	1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1	1345	Fine / Raim	0	0	0	20.9	21/1011	4.3
	***	1645	Fine / Ratin	0	0	0	20.9	21/1011	4.3
WPRTTA 4	8/12/2021	0845	Fine / Rain	0	0	0	20.9	20/101	4
****	V. 10	1345	Fine / Rain	O	0	0	20.9	21/1011	4
		1645	Fine / Rain	0	0	0	20.9	21/1010	4
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Name & Designation

Signature

<u>Date</u>

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

					Monitoring wells	s / Surface G	as Emissic	on	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 2	9/12/2021	0845	Fine / Rain	0	0	0	20-9	20/10/1	3.8
		1345	Fine / Bain	0	0	0	2:0.5	21/1012	3.8
	****	1645	Fine / Bain	0	0	0	20.4	21/1012-	3.8
WPRTTA 3	9/12/2021	0845	Fine / Rain	0	0	0	20.9	19/1010	4.3
	1	1345	Fine / Rain	0	0	0	20.4	21/1012.	4.3
	T	1645	Fine / Rain	0	0	0	20.9	21/1012	4.3
WPRTTA 4	9/12/2021	0845	Fine / Bain	0	0	0	20.9	20/1011	4
		1345	Fine / Bain	0	0	0	20.9	2//10/1	4
		1645	Fine / Bain	0	0	0	20.9	21/1010	4
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Name & Designation

Signature

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Date of measurement:

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Dates calibrated
28 JUL 2021
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					Monitoring well	s / Surface G	as Emissic	in	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 2	10/12/2021	0845	Fine / Bain	0	0	0	20.9	20/1011	3.8
	1 1 2 2 2 3	1345	Fine / Rain	0	0	0	2019	21/10/2	3.8
<del></del> <del>''</del>		1645	Fine / Bain	0	0	0	20.9	21/1012.	3.8
WPRTTA 3	10/12/2021	0845	Fine / Pain	0	0	0	20.9	19/1010	4.3
-17/11	1 - 1	1345	Fine /_Rain	0	0	0	20.9	21/1011	4.3
		1645	Fine / Rain	0	0	0	20.9	21/1011	4.3
WPRTTA 4	10/12/2021	0845	Fine / Rain	0	0	0	203	19/1009	4
	1 2 1	1345	Fine / Bain	0	0	0	20.9	20/1010	
		1645	Fine / Rain	0	0	0	209	20/1010	4
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Name & Designation

Dash Ip (Safety Office [Renopipe])

10/12/2021

<u>Date</u>

Laboratory Staff:

Field Operator:

Checked by:

Signature



Contract no. 13/WSD/16
Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

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Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 2	11/12/2021	0845	Fine / Bain	0	0	0	20.9	21/1011	3.8
	(1)121202	1345	Fine / Rain	0	0	0	20.9	22/1/012	3.8
		1645	Fine / Rain	0	0	0	20.7	22/1012	3.8
WPRTTA 3	11/12/2021	0845	Fine / Rain	0	0	0	20.9	2011009	4.3
	11/12/2021	1345	Fine / Rain	0	0	0	20.9	22/1011	4.3
		1645	Fine / Rein	Ö	0	0	_20,ૈ	22/1011	4.3
WPRTTA 4	[1/12/2021	0845	Fine / Rain	0	0	0	20.9	21/1009	4
	1 1 2 2 2 2 1	1345	Fine / Rain	0	0	0	20.9	22/1011	4
	·**-	1645	Fine / Rain	0	0	0	20.9	22/1010	4
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	t								
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Name & Designation

<u>Signature</u>

<u>Date</u>

Field Operator:

Dash Ip (Safety Office [Renopipe])

11/12/2021

Laboratory Staff:

Checked by:

皇偉傑 RSO (POCJV)

11/12/:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Date of measurement:

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Dates calibrated
28 JUL 2021

-		<del></del>			Monitoring well:	s / Surface G	as Emissic	on	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 2	13/12/2021	0845	Fine / Rain	0	0	0	20.9	1911009.	3.8
· · · · · · · · · · · · · · · · · · ·	1 1115	1345	Fine / Bain	0	0	0	20.9	2/1010	3.8
		1645	Fine / Bain	0	0	0	20.9	21/1010-	3.8
WPRTTA 3	13/12/2021	0845	Fine / Rein	0	0	0	203	18/ joil	4.3
•		1345	Fine / Bain	0	0	0	20.9	20/1010	4.3
		1645	Fine / Rath	0	0	0	20.9	20/1010.	4.3
WPRTTA 4	13/17/2021	0845	Fine / Rain	0	0	0	20.9	70/100	4
· · · ·		1345	Fine / Barn	0	0	0	20.9	21/101	4
		1645	Fine / Rain	0	0	0	20.9	21/1011	4
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Name & Designation

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:

Field Operator:

Checked by:

13112/2021

Signature



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021
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			1	Monitoring wells / Surface Gas Emission								
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)			
WPRTTA 2	14/12/2021	0845	Fine / Bain	0	0	0	20.9	19/1010	3.8			
	, , , , , , , , , , , , , , , , , , , ,	1345	Fine / Bain	0	0	0	209	2//104	3.8			
		1645	Fine / Bain	О	0	0	20.9	21/1011	3.8			
WPRTTA 3	14/12/2021	0845	Fine / Bain	0	0	0	20.9	20/1009	4.3			
///	1	1345	Fine / Bain	0	0	0	20.9	22/1012	4.3			
		1645	Fine / Barn	0	0	0	20.9	22/10/2	4.3			
WPRTTA 4	14/12/2021	0845	Fine / Bain	0	0	0	20,9	2011009	4			
	T	1345	Fine / Rain	_ 0	0	0	20.9	21/1010	4			
		1645	Fine / Bain	0	0	0	20.9	21/1010	4			
	J.,411											
								I				

Name & Designation

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:

Acuity Sustainability Consulting Limited

Field Operator:

Checked by:

Signature

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Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

			Monitoring wells / Surface Gas Emission								
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m		
WPRTTA 2		0845	Fine / Rain	0	0	0			3.8		
		1345	Fine / Rain	0	0	0			3.8		
		1645	Fine / Rain	0	0	0			3.8		
WPRTTA 3	15/12/2021_	0845	Fine / Rain	0	0	0	209	21/100	4.3		
		1345	Fine / Rain	0	0	0	20.3	22/1012	4.3		
- Matter		1645	Fine / Bain	0	0	0	20-9.	22/10/2	4.3		
WPRTTA 4	15/12/2021	0845	Fine / Barin	0	0	0	20.0	21/010	4		
*** **		1345	Fine / Rain	0	0	0	209	22/1010	4		
		1645	Fine / Bain	0	0	0	20.9	21//011	4		
				ļ		İ			}		

Name & Designation

Signature

<u>Date</u>

Field Operator:

Dash Ip (Safety Office [Renopipe])

15/12/2021

Laboratory Staff:

Checked by:

翟偉傑 RSO (POCTV)



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

calibrated	Sampling equipment used:				
JL 2021	PGM-2500P (QRAE III)				
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	Date of measurement	Monitoring wells / Surface Gas Emission								
Sample location		Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
		0845	Fine / Rain	-0	0	0			3.8	
		1345	Fine / Rain	0	0 -	0			-3.8	
		1645	Fine / Rain	0-	0	- 0			3.8	
WPRTTA 3	16/12/2021	0845	Fine / Bain	0	0	0	20.9	22/1011	4.3	
	10 12 22	1345	Fine / Rain	0	0	0	209	23/1012	4.3	
		1645	Fine / Bain	0	0	0	20.9	23/1017		
WPRTTA 4	16/12/2021	0845	Fine / Bain	0	0	0	20.9	72-11011	4	
	7777   2-1,-02!	1345	Fine / Bain	0	0	0	201.9	24/1012	4	
		1645	Fine / Rann	0	0	0	20.9	23/1011	4	
	* T									
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Name & Designation

Signature

<u>Date</u>

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

		<del></del>			Monitoring well	s / Surface G	as Emissio	n					
Sample location	Date of measurement					Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 2		0845	Fine / Rain	-0		-0-			3.8				
		- 1345	Fine / Rain	- 0	- 0				3.8				
		1645	Fine / Rain	0	- 0	0			3.8				
WPRTTA 3	17/12/2021	0845	Fine / Rain	0	0	0	20.9	19/1011	4.3				
71.4	1	1345	Fine / Bain	0	0	0	20.9	21/1012	4.3				
		1645	Fine / Rain	0	0	0	209	21/1012.	4.3				
WPRTTA 4	17/12/221	0845	Fine / Bain	0	0	0	209	18/1011	4				
	1-4	1345	Fine / Barin	0	0	0	209	2/1/012	4				
		1645	Fine / Rain	0	0	0	20.9.	20/1011	4				
						<u> </u>							
	T			ļ		l			L				

Name & Designation

<u>Date</u>

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:

翟偉傑 RSO ( POCTV )

Signature



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

	Date of measurement				Monitoring well:	s / Surface G	as Emissic	ın	
Sample location		Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA-2		0845	- Fine / Rain	0 -		0			3.8
		1345	Fine / Rain	0		0			3.8
	<b></b>	1645	Fine / Rain	- 0		0		-	3.8
WPRTTA 3	18/17/2021	0845	Fine / Rain	0	0	0	20%	17/1009	4.3
		1345	Fine / Bain	0	0	0	209	2011010.	4.3
<del>-</del> '.		1645	Fine / Rain	0	0	0	20.9	20/1011	4.3
WPRTTA 4	18/12/2021	0845	Fine / Rain	0	0	0	20.9	18/1010.	4
		1345	Fine / Ram	0	0	0	20.9	20/1011	4
		1645	Fine / Rain	0	0	0	20.9	20/1011	4
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						l	1		l <u>.</u>

Name & Designation

Signature

<u>Date</u>

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

					Monitoring wells	s / Surface G	as Emissic	n	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 3	20/12/2021	0845	Fime / Rain	0	0	0	20.9	17/1010.	4.3
		1345	Fine / Rain	0	0	0	202	20 (1011	4.3
		1645	Eine / Rain	0	0	0	اگر ہے 2	20/100	4.3
WPRTTA 4	20/12/2021	0845	Firme / Rain	0	0	0	20.9	1811008	4
		1345	Fin€ / Rain	0	0	0	20.5	21/1011	4
		1645	Fine / Rain	0	0	0	20.9		4
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Name & Designation

<u>Signature</u>

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

					Monitoring wells	s / Surface G	as Emissic	n		
Sample location	Date of measurement		Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 3	2//12/2021	0845	Fine / Barin	0	0	0	209	17/1010	4.3	
		1345	Fine / Rain	0	0	0	208	18/1010	4.3	
		1645	Fine / Rain	0	0	0	20.9	18/1010	4.3	
WPRTTA 4	21/12/2021	0845	Fine / Bafn	0	0	0	20.3	17/1009		
		1345	Fine / Rain	0	0	0	20-9	17/1008	4	
		1645	Fine / Barin	0	0	0	20-9	18/1010	4	
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Name & Designation

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

		Monitoring wells / Surface Gas Emission							
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 3	22/12/2021	0845	Fine / Rain	0	0	0	الأمد	1811009	4.3
		1345	Fine / Rain	0	0	0	208	20/1010	4.3
		1645	Fine / Rain	0	0	0	20.9	20/1010	4.3
WPRTTA 4	22/12/2021	0845	Fine / Bain	0	0	0	مر ا	19/1009	4
		1345	Fine / Barin	0	0	0	2009	20/1008	4
		1645	Fine / Rain	0	0	0	20.9	21 /1010.	4
								•	
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Name & Designation

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<u>Date</u>

Field Operator:

Dash Ip (Safety Office [Renopipe])

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22/12/2021



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021
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					Monitoring well:	s / Surface G	as Emissic	n	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 3	23/12/2021	0845	Fine /_Rain	0	0	0	20.9	/4//009.	4.3
		1345	Fine / Bain	0	0	0	20.9	21/1000	4.3
		1645	Fine / Bain	0	0	0	20.9	21/1010	4.3
WPRTTA 4	23/12/2021	0845	Fine / Rain	0	0	0	20.9	20/100%	4
		1345	Fine / Raier	0	0	0	209	21/1010	4
<u> </u>		1645	Fine / Batn	0	0	0	20.9	21/1010.	4
				<b></b>					

Name & Designation

Dash Ip (Safety Office (Renopipe))

Laboratory Staff:

Field Operator:

Checked by:

Signature

Date

23/12/202

23/12/202/



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

			Ī.		Monitoring wells	s / Surface G	as Emissio	on	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Fiammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 3	24/12/2021	0845	Fine Bair	0	0	0	72. T	19/100	4.3
	,	1345	Fine / Rain	0	0	0	20.9	20/1009	4.3
		1645	Fine / Rain	0	0	0	20.9	20/1003	4.3
WPRTTA 4	24/12/2021	0845	Five / Rath	0	0	0	20.9	19/1007	4
		1345	Fine / Rain	0	0	0	30-9	20/1010	4
		1645	Fine / Rain	0	0	0	20.9	20//010	4
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Dash Ip (Safety Office [Renopipe])

24112/2021

Laboratory Staff:

Field Operator:

Checked by:

翟偉傑 RSO (POCTV)

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Signature

24/12/2021



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021
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			Monitoring wells / Surface Gas Emission						
Sample location	Date of measurement	neasurement Sampling time W	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 3	78/12/2021	0845	Fine / Rain	0	0	0	20.1	14/1008.	4.3
	1	1345	Fine / Rain	0	0	0	20 8	16/1010	4.3
		1645	Fine / Bain	0	0	0	20.9	17/1010	4.3
WPRTTA 4	28/12/2021	0845	Fine / Bain	0	0	0	20.9	16/1009	4
	' '	1345	Fine / Rain	0	0	0	20.9	18/1010	4
		1645	Fine / Rain	0	0	0	20.9	. 18/1010	

Name & Designation

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

***			Monitoring wells / Surface Gas Emission								
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
WPRTTA 3	23/12/2021	0845	Fine / Rain	0	0	0	20.9	17/1009	4.3		
	27/12/2021	1345	Fine / Bairr	0	0	0	20.9	19/1010	4.3		
		1645	Fine / Raim	0	0	0	20.9	19/1010	4.3		
WPRTTA 4	28/12/2021	0845	Fine / Baim	0	0	0	20.9	18/1010			
	1	1345	Fine / Raim	0	0	0	20.9	20/1011	4		
		1645	Fine / Rain	0	0	0	20.9	20/1011	4		
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					<u> </u>						

Name & Designation

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:

Checked by:

Field Operator:

<u>Date</u>

Signature



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

					Monitoring well	s / Surface G	as Emissic	on	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 3	30/12/2021	0845	Fine / Raim	0	0	0	20.9	17/1009,	4.3
	2011.72.1	1345	Fine / Bain	0	0	0	20.9	19/1011	4.3
		1645	Fine / Raffn	0	0	0	20.9	19/1011	4.3
WPRTTA 4	30/17/2021	0845	Fine / Pain	0	0	0	20.9	17/1010	4
	( )	1345	Fine / Rain	0	0	0	20.9	18/1069	4
		1645	Fine / Raim	0	0	0	20.9	18/1009	4
,		*****							
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Name & Designation

<u>Signature</u>

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:

Checked by:

翟偉傑 LSO POCTV



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

					Monitoring well	s / Surface G	as Emissio	on	
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
WPRTTA 3	3/112/2021	0845	Fine / Rain	0	0	0	20.9	18/1009	4.3
	-	1345	Fine / Rain	0	0	0	20.9	20/1010	4.3
		1530	Fine / Rain	0_	0	0	20.9	19/1010.	4.3
WPRTTA 4	31/12/2021	0845	Fine / Baim	0	0	0	20.9	18/1009	4
		1345	Fine / Bain	0	0	0	20.9	19/1010	4
		1530	Fine / Rain	0	0	0	20.9	19/1010	4
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Name & Designation

**Signature** 

<u>Date</u>

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

			Monitoring wells / Surface Gas Emission								
Sample location	n Date of measurement	Sampling tîme	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
WPR PITA	1/12/2021	0830	Fine / Bain	0	0	0	20.9	17/1011	13m.		
		1330	Fine / Bain	0	0	0	20.9	19/1012			
		1700	Fine / Rain	0	0	0	20.9	18/1012.	13		

Name & Designation

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:

Field Operator:

Checked by:

<u>Date</u>

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Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

			Monitoring wells / Surface Gas Emission								
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
WPR PITA	2/12/2021	0830	Fine / Batin	0	0	0	20.9	16/1011	13m.		
		1330	Fine / Barin	0	0	0	20.9	17/1011	13		
		1700	Fine / Bain	0	0	0	20.9	17/1011	13 m.		
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Name & Designation

Signature

<u>Date</u>

Field Operator:

Dash Ip (Safety Office [Renopipe])

2/12/202

Laboratory Staff:

Checked by:

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2/12/2021



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated				
PGM-2500P (QRAE III)	28 JUL 2021				

			Monitoring wells / Surface Gas Emission								
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
WPR PITA	3/12/2021	0830	Fine / Rain	0	0	0	20.9	16/1010	13 m		
		1330	Fine / Bain	- 0	0	0	20.9	17/1011	13:00		
		1700	Fine / Rain	0	0	0	20.9	18/1011	13		

Name & Designation

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:

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<u>Signature</u>

<u>Date</u>



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Wan Po Road Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/W5D/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500P (QRAE III)	28 JUL 2021

			Monitoring wells / Surface Gas Emission								
Sample location	Date of measurement	Sampling time	Weather condition	Balance gas (%)	Flammable gas (methame %)	Carbon monoxide( %)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
WPR PITA	4/12/2021	0830	Fine / Baifi	0	0	0	20.9	17/10:1	13 m		
		1330	Fine / Rain	0	0	0	20.9	19/1012	13,		
		1700	Fine / Bain	0	0	0	20.9	1811011	13 m.		
			•								
							1				

Name & Designation

Field Operator:

Dash Ip (Safety Office [Renopipe])

Laboratory Staff:

Checked by:

Signature

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Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site:

13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Dates calibrated
18 74 21

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission								
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
Pit B	1 - 12 - 2021	08: 05	Rain / Fine	G	C	Ó	20.9	21/189	9		
	1-12-21	13:10	Fin	در	0	C	20.9	23 / 191	Ŷ		
	1-12-21	17:05	Fina	J	7	0	20.8	21/897	q		
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Name & Designation

Signature

<u>Date</u>

Field Operator:

東 作光、[Wellcon] CP

na di

1 - 12 - 2021

Laboratory Staff:

Checked by:

置偉傑 POCIV RSo

1 - 12 - 2021

ENVIRONMENTAL RESOURCES MANAGEMENT



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site:

13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated					
PGM-2702 (BRAG-111)	2 Jul 21					

Sample location	Date of measurement	Sampling time								
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
Pit B	3-12-2021	01:05	Rain / Eine	0	D	,	20.7	19/ 345	4	
	3-12-21	13:05	Fire	Ö	,	٥	20.8	122/ 917	3	
	3-12-21	17=10	Fine		<i>U</i>	С	20.9	23/ 588	9	
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			<u> </u>					//		
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			-	-				//		

Name & Designation

Signature

Date

Field Operator:

Wellcon) CP don Mi On

3 -12 -2021

Laboratory Staff:

Checked by:

翟偉傑 POCJV RSO

3-12-2021

ENVIRONMENTAL RESOURCES MANAGEMENT



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site:

13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated			
PGM-2500 (QRAt -111)	28 Jul 21			

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
Pit B	4-12-2021	73: PA	Rain / Fine	٥	P	c	) v . (	21/ 395	₹	
	4-12-21	13:10	Fine	0	0	÷	20.3	22/ 983	P	
	4-12-21	17=07	Fine	0	υ	0	20.9	23/ 998	8	
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	Name & Designation	Signature	<u>Date</u>	
Field Operator:	機能 [Wellcon) CP lan	Men the	4-(2-2021	
Laboratory Staff:	'	1 ,		
Checked by:	翟倉傑 Crat Wal Kit	1110	4 - 62 - 2021	
ENVIRONMENTAL RESOURCES MANAGE	EMENT .			Environmental Protection Department
			13	



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site:

13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
P6M-2500 (aR/E1/1)	2P T. L 21
	2 10

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)		Temp (°C) / Pressure (mbar)	Remark Depth (m)	
Pit B	(9 - /7 - 2021	08111	Rain / Fine	0	e e	0	20-9	21/999	٦	
	6-12-7021	13:23	=:10	0	P	Q	20.9	21/999	9	
	6-12-2021	17:00	TING	9	0	0	20,9	22/ 444	1	
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			-					1 /		

Name & Designation

Signature

Date

Field Operator:

Checked by:

原药店

[Wellcon) CP Chan wai dh

6-12-2021

Laboratory Staff:

翟偉傑

INCIN RSO

6 - 12-2021

ENVIRONMENTAL RESOURCES MANAGEMENT



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site:

13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
P6M-2500 (QR42-11)	23 Tul 21

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
Pit B	7 - (2 - 2021	08:17	Rain / Fine	0	-0	0	20.9	21/949	9	
	7-02-2071	13121	FINR	Ð	0	70	20.9	72/999	9	
	7-12-2021	17:28	71119	0	0	ð	20.9	22/497	4	
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Name & Designation

Signature

**Date** 

Field Operator:

[Wellcon) CP Shin Mai th'

7 - 12 - 2021

Laboratory Staff:

Checked by:

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ENVIRONMENTAL RESOURCES MANAGEMENT



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site:

13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PGM-2500 (QRAE-111)	2) Jul 21

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
Pit B	8-12-2021	C1120	Rain / Fine	0	P	<sub>O</sub>	20.9	21/999	9	
	8-12-2021	13,11	F119	0	0	e	20.9	22/992	a	
	8-15-3021	17,00	Fino		0	0	20.9	22/ 947	9	

Name & Designation

Signature

Date

Field Operator:

BA SECTION

[Wellcon) CP then Not this

8-12-2021

Laboratory Staff:

Checked by:

翟偉傑

OCJV RSO

8-12-2021

ENVIRONMENTAL RESOURCES MANAGEMENT



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
D6m -2500 ERRAE-41)	28 JUL 2/

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
Pit B	10- [2 - 2021	08116	Rain / Fine	0	10	Ø	20.9	21/999	9	
	10-12-2021		FINS	¢	P	0	20.9	27/0197	9	
	10-12-2021	1 72	700	0	0	0	209	22/997	_ a	
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Name & Designation

Signature

**Date** 

Field Operator:

MANS

[Wellcon) CP Chan man chi

10-12-2021

Laboratory Staff:

Checked by:

翟偉傑

POCJV RSO

10-12-2021

ENVIRONMENTAL RESOURCES MANAGEMENT



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site:

13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated		
DGM -250- CRRAETU)	20 TUI 21		

Pit B	1-(2 -2021		Weather condition	Balance gas	Flammable	Carbon	Oxygen (%)	Temp (°C) /	Remark
Pit B	1-12 - 2021				gas (methane %)	monoxide(%)		Pressure (mbar)	Depth (m)
1 1 1		0823	Rain / Fine	0		0	20 09	21/999	9
	11-12-2021	03:47	7:10	0	-D	0	20.9	21/992	a
	11-12-2021		FIRE	Ð	0		20.4	22/999	9
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				-				/	
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						14 (14 (14 (14 (14 (14 (14 (14 (14 (14 (		/	

Name & Designation

Signature

Date

Field Operator:

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[Wellcon) CP This was the

11 - 12 - 2021

Laboratory Staff:

Checked by:

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POCJV 830

11 - 12-2021

ENVIRONMENTAL RESOURCES MANAGEMENT



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site:

13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
PEM - 2500 (0, A)+ 8-14)	28-10/21

Sample location	Date of measurement				Monitoring wells / Surface Gas Emission						
				Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)		
Pit B	13-12 - 2021	07119	Rain / Rine	0	0	0	20.9	2, 1999	9		
	13-12-1021	13/17	Phl	. 0	0	(*	20.9	22/ 929			
	13-12-2027	16:43	Phe	Ü	Ū	9	20-7	22/ 181	- Ŷ		
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Name & Designation

Signature

Date

Field Operator:

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[Wellcon) CP Ann war this

13-12-2021

Laboratory Staff:

Checked by:

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ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT

13



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site:

13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
16th-2600 (apre-1)	2/14/21

Sample location	Date of measurement	1	1	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)			
Pit B	14- 12-2021	08:11	Rain / Fine	0	0	Ð	20.9	211 999	G			
	14-12-201	13/19	TING	0	0	0	70.3	7.1/ 997	a			
	119.12-2021	17102	Fine	0	.0	Ø	201	22/ 996	9			
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Name & Designation

Signature

<u>Date</u>

Field Operator:

魔衛怎

[ Wellcon ) CP

14-12

Laboratory Staff:

Checked by:

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POCJV 80

14-12-2021

ENVIRONMENTAL RESOURCES MANAGEMENT



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site:

13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
H1013500PN	25/11/2021
D64-2500CaNA014)	21 mil 21
Ve 12 - Steel Gipperio	1000

Sample location	Date of measurement		Sampling time	Monitoring wells / Surface Gas Emission							
					Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pit B	15-12 -2021	02.08	Rain / Fine	O	0	0	29	21/ 999	9		
	15./2-202/	12111	Fino	0	0	0	2029	21/ 999	9		
	15-12.202)	17:01	Plas		7	Ö	201	22/ 495	9		
-								/			
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	Name o	& Designation	Signature	<u>Date</u>
Field Operator:	加发Chan Wa	ai Chi [Wellcon) CF	An man shi	15-12-2021
Laboratory Staff	:		1 /	
Checked by:	程偉傑 Chak Wai Kit	POCJV XX	(14/1)	15 - 12-2021
		/ "		

ENVIRONMENTAL RESOURCES MANAGEMENT



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site:

13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
H1013500PN	25/11/2021
DEM-2500 (10 noe-11)	2250121

ENVIRONMENTAL PROTECTION DEPARTMENT

Sample location	Date of measurement	1		Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)			
Pit B	6-12-2021	0317	Rain / Fine	0	0	0	20,0	21/499	9			
	16-12-7021	/3.133	Fire	7	в	0	20,5	21/ 995	9			
	16-17-2121	17:28	7422	- /3	)	T.	209	22/ 999	9			
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Name & Designation Signature **Date** Chan Wai Chi [Wellcon ) CP Chun Au Field Operator: / Laboratory Staff: Checked by: ENVIRONMENTAL RESOURCES MANAGEMENT

13



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site:

13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
H1013500PN	25/11/2021
1)64-25-00 (QPA) 111	22/11/21

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
		condition (%) gas	Flammable gas (methane %)	Carbon monoxide(%)		Temp (°C) / Pressure (mbar)	Remark Depth (m)			
Pit B	17-12 -2021	08:31	Rain / Fine	0	· p	0	20.9	21/995	9	
	17-12-202	1357	Fine	D	0	2	20.9	22/ 999	9	
	17-12-2021	16:41	7,19	20	0	1	20.9	22/ 997	9	
								/	****	
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Name & Designation Signature Date

Chan Wai Chi [Wellcon ) CP Chan Nov Ch 17 - 12 - 2021

Laboratory Staff:

Field Operator:

Checked by:

翟偉傑

POCJV 136

7-12-2021

ENVIRONMENTAL RESOURCES MANAGEMENT



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site:

13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
H1013500PN	25/11/2021
1) 614-2500 CRPACY()	2f TUL 21
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Sample location	Date of measurement	Sampling time		as Emission	s Emission				
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pit B	12 - 2021	01/22	Rain / Fine	0	0	c)	2019	22/ 909	9
	18.12.2021	13:19	Fine	P	N	C	209	22/ 995	G
	18-12-2021	17;04	Fine	0	0	D	20.9	22/ 996	on on
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Name & Designation

Signature

<u>Date</u>

Field Operator: Walks &

Chan

Chan Wai Chi I V

[Wellcon) CP Chan w

was The

12-12-202

Laboratory Staff:

Checked by:

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18-12-2021

ENVIRONMENTAL RESOURCES MANAGEMENT



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site:

13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
H1013500PN	25/11/2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
Pit B	30-12-2021	08:20	Rain /(Fine)	0	0	0	20.9	21/999	9	
	20-12-22	13:10	Fine	-0	0	0	20,9	22/ 494	9	
	20-12-2021		Fine	0	Ð	0	20.9	22/999	q	
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Name & Designation

Signature

<u>Date</u>

Field Operator:

Chan Wai Chi [Wellcon) CP chan wai chi 20-12-2021

Laboratory Staff:

Checked by:

20 - (2-2021

ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT

13



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site:

13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
H1013500PN	25/11/2021

Sample location	Date of measurement	Sampling time								
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
Pit B	21-12-2021	08:13	Rain /(Fine)	2	Q	0	200	21/999	9	
	21-12-2021		Fine	0	Ð	0	20.9	22/949	9	
	21-12-2021	17:17	Fine	6	0	0	20.9	22/999	9	
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Name & Designation

Signature

Date

Field Operator:

Chan Wai Chi [Wellcon) CP chan wai chi 2, -12 -2021

Laboratory Staff:

Checked by:

C. Felow POCJV

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21 - 12 - 2021

ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT

13



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site:

13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
H1013500PN	25/11/2021

Sample location	Date of measurement	Sampling time							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pit B	22-12-2021	08:20	Rain / Fine	0	Ð	8	20,7	20/ 998	9
	22-12-2-21		Fine	0	0	0	20,6	22/999	9
	22-12-7021		Fine	p	ь .	6	20-9	2, 1997	9
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Name & Designation

Signature

Date

Field Operator:

Chan Wai Chi [Wellcon ) CP chan wai chi

22-12-2021

Laboratory Staff:

Checked by:

c. Fichan POCJV

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22 - 12 - 2021

13

ENVIRONMENTAL RESOURCES MANAGEMENT



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site:

13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

25/11/2021

Sample location	Date of measurement	Sampling time								
		,	Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
Pit B	23- 12 - 2021	08=10	Rain / Fine	0	Ð	0	20 8	22/ 949	9	
	23-12-2021	13:10	Fine	e e	0	0	20,4	21/ 949	9	
	23-12-2021	17:30	Fine	0	0	0	20,9	22/999	9	
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Name & Designation

Signature

Date

Field Operator:

Chan Wai Chi [Wellcon ) CP chan wai, chi

23-12-2021

Laboratory Staff:

Checked by:

C.F. Chan POCJV

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23 - 12 - 2021

ENVIRONMENTAL RESOURCES MANAGEMENT



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site:

13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
H1013500PN	25/11/2021

Sample location	Date of measurement	Sampling time	g Monitoring wells / Surface Gas Emission							
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
Pit B	24-12-2021	28/12	Rain / Fine	D	٥	Ð	20.4	22/ 999	9	
	24/12/2021	13-19	Fine	0	0	C	20.9	22/ 999	9	
	14/12/2021	17:17	Fine	0	0	0	20.9	22/999	9	
							1	/	1	
								/		
								/		
								/		
								1		
								1 7		
								1 7		
				-				1 /		
								1		
	The state of the s							1 //		
					<u> </u>			1 //		

Name & Designation

Signature

Field Operator:

Chan Wai Chi [Wellcon ) CP lhoty vai di

24-1) -2021

Date

Laboratory Staff:

Checked by:

CHAN WANG PAT POCIN

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74 - 12 - 2021

ENVIRONMENTAL RESOURCES MANAGEMENT



Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site:

13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated			
H1013500PN	25/11/2021			

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pit B	28-12-2021	071R	Rain //Fine	0	0	0201	20 9	23/999	9
	19.12.02)	13:17	P/10	0	R	0 200	2007	21/999	9
	79.12-2011	16:37	FAG	0	. 0	0 800	201	22/492	9
								/	
								1	
-								/	
								/	
								/	

Name & Designation

Signature

Date

Field Operator:

Chan Wai Chi [Wellcon) CP Dan May 29 -12 -2021

Laboratory Staff:

Checked by:

19N MANG FAT POCJ

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18 - 16 - 2021

ENVIRONMENTAL RESOURCES MANAGEMENT



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site:

13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
H1013500PN	25/11/2021
·	

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pit B	7 at 12 - 2021	021/8	Rain / Fine	0	0	0	297	22/064	9
	29-12-2021	131/1	FINS	R	P	O	267	21 / 999	9
	7012.2026	17:01	Fine	- O	0	Ü	20.7	21/997	9
								/	
								/	
				· .				/	
								/	
								/	
								/	
								/	
								/	
								/	

Name & Designation

Signature

Date

Field Operator:

Chan Wai Chi [Wellcon ) CP Aug Mil A

Laboratory Staff:

Checked by: (HAN WANG PAT

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14 - M-2021

ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site:

13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Sampling equipment used:	Dates calibrated
H1013500PN	25/11/2021

Sample location	Date of measurement	Sampling time								
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)	
Pit B	30-12-2021	08-117	Rain / Fine	2	<i>0</i>	0	229	22/ 990	a	
	30-12:2021	134/4	710	0	100	0	20.9	21/ 999	6	
	30 42-2021	17:17	2:0	P	Ű	0	20.9	21/997	d	
							,	/		
								/		
								/		
								//		
								/		
								1		
								1		
								1		
								1 /		
								1		
		1	<del>                                     </del>					1 //		

Name & Designation

Signature

Date

Field Operator:

Chan Wai Chi [Wellcon) CP Chan And Al 30-12-2021

Laboratory Staff:

Checked by:

30 - 12 -2021

ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring -Field Measurement Recording Sheet

Name of site:

13/WSD/16 - Mainlaying in Tseung Kwan O

Date of measurement:

Dates calibrated
25/11/2021

Sample location	Date of measurement	Sampling time	Monitoring wells / Surface Gas Emission						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon monoxide(%)	Oxygen (%)	Temp (°C) / Pressure (mbar)	Remark Depth (m)
Pit B	31-4 -2021	602 22	Rain / Fine	10	0	0	207	22/ 999	9
	31-12-2021	6g2122 13:30	= 100	10	D	0	247	21/ 999	a
	31-12-221	17:01	Ties		70	N	29.7	211999	6
								/	/
						1		/	
								1	
								1	
								1	
								1 /	
								1	
								1	
								1	
								1 /	-
					-			1 /	

Name & Designation

Signature

**Date** 

Field Operator:

Chan Wai Chi [Wellcon ) CP dur M

A 3) 1-12-2021

Laboratory Staff:

Checked by:

CHAN WANG FAT POCJV

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31 - 12 - 2021

ENVIRONMENTAL RESOURCES MANAGEMENT

ENVIRONMENTAL PROTECTION DEPARTMENT



Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	-12-2021	8:30	0.846		
		13:30	7140.0	5.5	
		17:00	0.0415		
Area B	1 -12-2021	8:45	0.0416		
		13:45	0.0417	2.5	
		16:45	0.0416	2.0	
Pit D	-12-2021	9:10			
		14:10			
137 Pit B	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05		-	
		15:05			
WPR 2	-12-2021	10:15	3.0416	3.8	
		15:15	0.0415	3.0	
WPR 4	1 -12-2021	10:25	0.0415	1.	
		15:25	7140.0	4	
WPR 3	-12-2021	10:45	8,460,0	4,3	
	•	15:45	0.0414	4,7	
Pit A	-12-2021	10:55	0.0415	13	
	15:55		3,0416	12	

Name & Designation Signature Date

Field Operator: Laboratory Staff: Checked by: | -12 - 2021



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	-12-2021	11:05	00416	9	
		16:05	0.0415	1	
					-
					-

Name & Designation <u>Signature</u>

Field Operator: Laboratory Staff:

Checked by:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	2 -12-2021	8:30	0.0146		
	2	13:30	0.04[7	5.5	
		17:00	0.0416		
Area B	2 -12-2021	8:45	0. 0415		
		13:45	P112a.o	2.5	
		16:45	0.0416		
Pit D	-12-2021	9:10			
		14:10			
137 Pit B	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	2 -12-2021	10:15	0.0418	3.8	1
	~	15:15	0.0417	2.0	
WPR 4	2 -12-2021	10:25	0.645	4.2	
		15:25	ુ ગંયાર્ક	4.3	
WPR 3	2 -12-2021	10:45	9140.0	4	
		15:45	0.0415	1	
Pit A	z12-2021	10:55	0.0417	13.	
		15:55	0.3416	12.	

Name & Designation Signature Date

Field Operator: Laboratory Staff: Checked by:



Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	3 -12-2021	8:30	0.0417		
		13:30	0.0418	\$,5	
		17:00	0.0415		
Area B	3 -12-2021	8:45	0.0416		
		13:45		2.5	
		16:45	0.0414		
Pit D	-12-2021	9:10			
		14:10			
137 Pit B	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	3 -12-2021	10:15	0.0418	3.8	
		15:15	0.045	2.4	
WPR 4	3 -12-2021	10:25	TJ40.0	4	
		15:25	0.0416	٦	
WPR 3	3 -12-2021	10:45	0.0446	4.3	
		15:45	0.0448	4	
Pit A	3 -12-2021	10:55	0.0411	13	
		15:55	6.0414		

Name & Designation

<u>Signature</u>

Date

3 - 12 - 2021



Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	3 -12-2021	11:05	4140.0	9	
		16:05	0.146.6	1	

Name & Designation	Signature	<u>Date</u>
		z _ 12 _ 2021



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	4 -12-2021	8:30	0.0444		
	-	13:30	8440.0	5.5	
		17:00	T#10.0		
Area B	4 -12-2021	8:45	0,0416		
		13:45	8/40.0	25	
		16:45	0.6417		+
Pit D	-12-2021	9:10			
		14:10			
137 Pit B	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05			
		15:05			+
WPR 2	4 -12-2021	10:15	0.0414	. C	
		15:15	145.0	3.8	-
WPR 4	4 -12-2021	10:25	0.0415	4	
		15:25	0.6415	7	
WPR 3	4 -12-2021	10:45	0.64[7	4.3	
		15:45	444.0	, -	+
Pit A	4 -12-2021	10:55	TH0.0	13	
		15:55	0.0415		

Name & Designation Signature

<u>Date</u>

4 - 12 - 2021



Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment use	ed: Dates calibrated
MultiRAE Lite, PGM-620	8 6/4/2021
M01C031772	-

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	4 -12-2021	11:05	8/H0/0	Q	
		16:05	0.0417	1	

Name & Designation Signature Date

Field Operator: Laboratory Staff: Checked by:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	6 -12-2021	8:30	0.446		
		13:30	0.0417	5.5	
		17:00	0.0417		
Area B	f -12-2021	8:45	0.045		
	•	13:45	8,000	2.5	
		16:45	0.0415		
Pit D	-12-2021	9:10			
		14:10			
137 Pit B	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	6 -12-2021	10:15	0.0415	3.8	
		15:15	0.0414	2.8	
WPR 4	6 -12-2021	10:25	71420	4	
		15:25	0.6417	Т	
WPR 3	6 -12-2021	10:45	9140	4.3	
		15:45	0.6415	7.7	
Pit A	-12-2021	10:55			
		15:55			

 Name & Designation
 Signature
 Date

 6 - 12 - 2021
 - 12 - 2021



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	6 -12-2021	11:05	0 06+16	9	
		16:05	0.0415		
					+

Name & Designation	Signature	<u>Date</u>	
			6 - 12 - 2021



Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	7 -12-2021	8:30	0,0417		
	,	13:30	0.0415	5-5	
		17:00	0.0415		
Area B	7 -12-2021	8:45	0.0416		
		13:45	0.045	2.5	
		16:45	0.0416		
Pit D	-12-2021	9:10			
		14:10			
137 Pit B	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	7 -12-2021	10:15	81400	3-8	1
	·	15:15	7140.0		
WPR 4	7 -12-2021	10:25	0.44 4	4	
	(	15:25	0:0416	*	
WPR 3	7 -12-2021	10:45	6.6415	43	
/	t .	15:45	0.6415		
Pit A	-12-2021	10:55			
		15:55			

Name & Designation

Signature

<u>Date</u>

7 - 12 - 2021



Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	7 -12-2021	11:05	0.0413	0	
		16:05	0,3414	<u> </u>	
					-
					<del>  ·                                     </del>

Name & Designation	Signature
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Field Operator: Laboratory Staff: Checked by: 7 - 12 - 2021

<u>Date</u>



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	Q -12-2021	8:30	3.0415		
	4	13:30	7/140.0	5.5	
		17:00	0.0416	3/3	
Area B	8 -12-2021	8:45	81420.0		
		13:45	7/10.0	2.5	
		16:45	8,140,0		
Pit D	-12-2021	9:10			
		14:10			
137 Pit B	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	§ -12-2021	10:15	0.2416	2.6	
	,	15:15	t .0414	3.8	
WPR 4	₹ -12-2021	10:25	0.0415	Lį	
		15:25	0.3414	7	
WPR 3	8 -12-2021	10:45	0.5416	43	
	_	15:45	7/40.0		
Pit A	-12-2021	10:55			
		15:55			

Name & Designation

<u>Signature</u>

<u>Date</u>

8 - 12 - 2021



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	9 -12-2021	8:30	0.04)4		
	'	13:30	0,0417	55	
		17:00	0.8415		
Area B	9 -12-2021	8:45	3440.00		
	ţ	13:45	T1P8, 8	2-5	
		16:45	d 145.0	2-0	
Pit D	-12-2021	9:10			
		14:10			
137 Pit B	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	9 -12-2021	10:15	8/H0.c	3.8	
	,	15:15	0.6/4/7		
WPR 4	9 -12-2021	10:25	0.6417	4	
		15:25	0.8416	4	
WPR 3	9 -12-2021	10:45	0-04-18	4.3	
		15:45	ર હવાઇ	7.7	
Pit A	-12-2021	10:55			
		15:55			

<u>Name & Designation</u> <u>Signature</u> <u>Date</u> 9 - 12 - 2021



Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O
Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	9 -12-2021	11:05	5,0412		
	,	16:05	0.0416		
	-				

<u>Name & Designation</u> <u>Signature</u> <u>Date</u> 9 - 12 - 2021



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	l∘ -12-2021	8:30	0,046		
		13:30	0;3414	5.5	
		17:00	0.0415		
Area B	o -12-2021	8:45	0,0417		
,		13:45	0,0418	2.5	
		16:45	0.446		
Pit D	-12-2021	9:10			
		14:10			
137 Pit B	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	to -12-2021	10:15	8 14% o	3-8	
		15:15	2,0499	3-9	
WPR 4	10 -12-2021	10:25	0.0445	4	
		15:25	J. 1946.	7	
WPR 3	1 - 12-2021	10:45	6,0417	4.3	
		15:45	J150.0	4.7	
Pit A	-12-2021	10:55			
		15:55			

Name & Designation

Signature

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10 - 12 - 2021



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	lo -12-2021	11:05	9145,0	q	
		16:05	0.0417	1	
					1
				1	

Name & Designation

Signature

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Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipme	ent used:	Dates calibrated
MultiRAE Lite, PG	M-6208	6/4/2021
M01C031772		

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	11 -12-2021	8:30	0.0416		
		13:30	0.0417	5.5	
		17:00	0.0416		
Area B	11 -12-2021	8:45	ઇ હિંગુલ્ડ		
		13:45	sis415	2.5	
		16:45	e		
Pit D	-12-2021	9:10			
		14:10			
137 Pit B	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	11 -12-2021	10:15	a.0415	3.8	
		15:15	0.3414		
WPR 4	11 -12-2021	10:25	००५५	4	
		15:25	8140,6		
WPR 3	(\-12-2021	10:45	r Hio.o	43	
		15:45	6.0416		
Pit A	-12-2021	10:55			
		15:55			

Name & Designation

Signature

<u>Date</u>

Field Operator: Laboratory Staff:

Checked by:



Contract no. 13/WSD/16
Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	1 -12-2021	11:05	2.0414	q	
		16:05	2,4416		
					+

Name & Designation Signature Date

Field Operator: Laboratory Staff: Checked by: ( - 12 - 2021



13 - 12 - 2021

Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	13 -12-2021	8:30	0.01414		
	,	13:30	0.8415	5.5	
		17:00	0.8415	J.J	
Area B	13 -12-2021	8:45	8140.0		
		13:45	0,041	2,5	
		16:45	0.0415		
Pit D	-12-2021	9:10			
		14:10			
137 Pit B	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	13 -12-2021	10:15	4,140° 0	2.	
		15:15	0.0415	3.8	
WPR 4	3 -12-2021	10:25	0.0416	4	
		15:25	0.0417	7	
WPR 3	13 -12-2021	10:45	7140,5	4.3	
	-	15:45	0.744	٦,)	
Pit A	-12-2021	10:55			
		15:55			

Name & Designation Signature Date

Field Operator:

Laboratory Staff:

Checked by:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	3-12-2021	11:05	0.0414	a	
		16:05	0.0415	1	
					-

Name & Designation Signature Date

Field Operator: Laboratory Staff: Checked by:



Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission  Carbon Dioxide (%)	Depth (m)	Remark
Area A	/4 -12-2021	8:30	Ø: 014   1		
		13:30	4 إيان، ٥	5.5	
		17:00	0,0418		
Area B	14 -12-2021	8:45	+-04[7		
		13:45	<b>८</b> .४५।८	2.5	1
		16:45	0.415		
Pit D	-12-2021	9:10			
		14:10			
137 Pit B	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	14 -12-2021	10:15	<sub>ઉ.સ્</sub> યાદ	3.8	
		15:15	d1F0.0		
WPR 4	14-12-2021	10:25	0.0412	1	
		15:25	0,6415	4.3	
WPR 3	(4 -12-2021	10:45	0.5H/3.	4	
		15:45	6.0417	7	
Pit A	-12-2021	10:55			
		15:55			

Name & Designation

Signature

Date

4 - 12 - 2021



Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	14 -12-2021	11:05	0.6414	Q	
		16:05	0.0415	τ .	

Name & Designation

Signature

Date

14 🚧 - 12 - 2021



Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	Area A     5 -12-2021		c-0416		
	, -	13:30	8)40.5	5.5	
		17:00	4.0415		
Area B	(5 -12-2021	8:45	8,0415		
		13:45	0.847	2.5	
		16:45	0.0417		
Pit D	-12-2021	9:10			
		14:10			
137 Pit B -12-2021	9:45				
		14:45			
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	-12-2021	10:15			
		15:15			
WPR 4	ر <sub>اح</sub> -12-2021	10:25	3140.0	1.	
	15	15:25	6.6415	4 .	
WPR 3	15 -12-2021	10:45	414.5		
	3	15:45	0.03416	4,3	
Pit A	-12-2021	10:55			
		15:55			

Name & Designation

<u>Signature</u>

<u>Date</u>

15 - 12 - 2021



Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	15 -12-2021	11:05	0,6417	9.	
		16:05	0.8415	(,	

Name & Designation

Signature

<u>Date</u>

15 - 12 - 2021



Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	16 -12-2021	8:30	0.0414		
	,	13:30	0.0415	5.5	
		17:00	0.0415		
Area B	(6 -12-2021	8:45	3140:0		
	, -	13:45	0.0416	2.5	
		16:45	4140.0	2.7	
Pit D	-12-2021	9:10			
		14:10			
137 Pit B	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	-12-2021	10:15			
		15:15			
WPR 4	16 -12-2021	10:25	e.2417	1.	
		15:25	0.0416	4	
WPR 3	6 -12-2021	10:45	7,449.0	4.3	
		15:45	0.26435		
Pit A	-12-2021	10:55			
		15:55			

Name & Designation Signature Date



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	/6 -12-2021	11:05	0:0417	٥	
		16:05	PIPON	7	-
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Name & Designation Signature

16 - 12 - 2021



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208 M01C031772	6/4/2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	7 -12-2021	8:30	0.0414		
	. (	13:30	T/420	5,5	
		17:00	4146.2		
Area B	7 -12-2021	8:45	2140.0		
		13:45	d/+16,0	25	
		16:45	e-0415		
Pit D	-12-2021	9:10			
		14:10			
137 Pit B	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	-12-2021	10:15			
		15:15			
WPR 4	17 -12-2021	10:25	0-014/4	4	
		15:25	5,0417	T	
WPR 3	12-2021 ج	10:45	0.0417		
		15:45	0.0415	4.3	
Pit A	-12-2021	10:55			
		15:55			-

 Name & Designation
 Signature
 Date

 7 - 12 - 2021



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	17 -12-2021	11:05	\$146.6	9	
		16:05	Q3415		
					-

Name & Designation Signature

Field Operator: Laboratory Staff: Checked by:



Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	IS -12-2021	8:30	و ، ځالا ک		
		13:30	41400	5.5	
		17:00	7100,0		
Area B	18 -12-2021	8:45	a. 6446		1
		13:45	0.0415	2.5	
		16:45	8143.0		
Pit D	-12-2021	9:10			
		14:10			
137 Pit B	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	-12-2021	10:15			
		15:15			
WPR 4	18 -12-2021	10:25	0.0417	4	
		15:25	9140.0		
WPR 3	I& -12-2021	10:45	21/1/20	4.3	
		15:45	0.0416	7()	
Pit A	-12-2021	10:55			
		15:55			

Name & Designation

Signature

<u>Date</u>

Field Operator.

Laboratory Staff:

Checked by:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	18 -12-2021	11:05	6.614,9	9	
		16:05	8/146.0		

Name & Designation Signature Date

Field Operator: Laboratory Staff: Checked by:



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	20 -12-2021	8:30	0.0415		
		13:30	1140.5	5.5	
		17:00	0.0415		
Area B	Zo -12-2021	8:45	7/40.0		
		13:45	d1420	2.5	
		16:45	6,6415		
Pit D	-12-2021	9:10			
		14:10			
137 Pit B	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	-12-2021	10:15			
		15:15			
WPR 4	20 -12-2021	10:25	3,0418	4	
		15:25	a 0417	4	
WPR 3	که -12-2021	10:45	0.04%	4.3	
		15:45	0.0415	~.>	
Pit A	-12-2021	10:55			
		15:55			

Name & Designation Signature

Field Operator: Laboratory Staff: Checked by: 20 - 12 - 2021

<u>Date</u>



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	212-2021	11:05	7146-0	9	
		16:05	81416.0	,	
				, , , , , , , , , , , , , , , , , , , ,	

Name & Designation Signature Date



Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	<u>حا</u> -12-2021	8:30	0.6414		
		13:30	0.13415	5.5	
		17:00	3.6416		
Area B	2) -12-2021	8:45	০,৬৭15		
		13:45	6 214/5	2.5	
		16:45	profitation		
Pit D	-12-2021	9:10			
		14:10			
137 Pit B	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	-12-2021	10:15			
		15:15			
WPR 4	21 -12-2021	10:25	6.0417	24	
		15:25	0-0496	<u> </u>	
WPR 3	2) -12-2021	10:45	T/V <sub>0-8</sub>	4.3	
	-1	15:45	6.4415		
Pit A	-12-2021	10:55			
		15:55			

Name & Designation

Signature

<u>Date</u>

과 - 12 - 2021



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	2 -12-2021	11:05	8140.0	9	
		16:05	0-1419	(	

Name & Designation Signature Date



Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	22-12-2021	8:30	0.04864		
		13:30	0.0415	5.5	
		17:00	2 lisas		
Area B	22 -12-2021	8:45	0416		
		13:45	5,146.5	2-5	
		16:45	0.0416		
Pit D	-12-2021	9:10	•		
	_	14:10			
137 Pit B	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	-12-2021	10:15			
		15:15			
WPR 4	22 -12-2021	10:25	0-8413	4	
	_	15:25	6.02114	· ·	
WPR 3	2712-2021	10:45	0-4/17	43	
		15:45	0.4415	+3	
Pit A	-12-2021	10:55			
		15:55			

Name & Designation

Signature

<u>Date</u>

22-12-2021



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	22-12-2021	11:05	0.0412	$a_{\rm p}$	
		16:05	0.8416	1	
	4.7				

Name & Designation Signature Date

Field Operator: Laboratory Staff: Checked by: 22 - 12 - 2021



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	23-12-2021	8:30	0.0415		
	~	13:30	0.445	5.5	
l		17:00	0,5418		
Area B	23 -12-2021	8:45	0.0416		
	-	13:45	0.0416	2.5	
		16:45	7/200		
Pit D	-12-2021	9:10			
		14:10			
137 Pit B	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	-12-2021	10:15			
		15:15			
WPR 4	23 -12-2021	10:25	9.0484	4	
		15:25	e:4t/15		
WPR 3	23 -12-2021	10:45	0.6413	4.3	
		15:45	0.6416	1.7	
Pit A	-12-2021	10:55			
		15:55			

Name & Designation

Signature

Date

13 - 12 - 2021



Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	رج -12-2021	11:05	d146.0	g	
	-	16:05	0.4415	7	
ı					
1					

lame & Designation	Signature	<u>Date</u>

Field Operator: Laboratory Staff: Checked by: 신3 - 12 - 2021



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	24 -12-2021	8:30	0.8415		
		13:30	6,0416	5.5	
		17:00	010416		
Area B	24 -12-2021	8:45	6-0417		
		13:45	0.0416	2.5	
		16:45	0.0417		
Pit D	-12-2021	9:10			
		14:10			
137 Pit B	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	-12-2021	10:15			
		15:15			
WPR 4	24 -12-2021	10:25	0.0415	4	
		15:25	0.6416	Т	
WPR 3	24 -12-2021	10:45	० ७५%	4.3	
		15:45	0.6414	7.7	
Pit A	-12-2021	10:55			
		15:55			

Name & Designation

<u>Signature</u>

<u>Date</u>

24-12-2021



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	24 -12-2021	11:05	2 140.0	9	
		16:05	0-8413	1	ļ
					<del>                                     </del>

Name & Designation	Signature	<u>Date</u>
		<b>3</b>

Field Operator: Laboratory Staff: Checked by: 24 - 12 - 2021



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	28 -12-2021	8:30	0.04(4		
		13:30	0,0416	2′2	
		17:00	T/49.5		
Area B	28 -12-2021	8:45	81460		
,		13:45	5 10415	2.5	
		16:45	०.७५१५		
Pit D	-12-2021	9:10			
		14:10			
137 Pit B -1:	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	-12-2021	10:15			
		15:15			
WPR 4	<sub>28</sub> -12-2021	10:25	0.0(4/3	4	
	20	15:25	7/40.0		
WPR 3	ეგ -12-2021	10:45	٥٠٠٥نارة	4.3	
	10	15:45	0.0416	7./	
Pit A	-12-2021	10:55			
		15:55			

<u>Name & Designation</u> <u>Signature</u> <u>Date</u> 28 - 12 - 2021



Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	28 -12-2021	11:05	T14a.o	9	
		16:05	1740,0		
	-				
	-				
		4			

Name & Designation Signature

Field Operator: Laboratory Staff: Checked by: z8 - 12 - 2021

Date



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

ر 12 - 12 - 2021

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	12-2021- 9د	8:30	0.6414		
		13:30	2149.0	53	
		17:00	5.6415		
Area B	<del>ا 12-2021 عام 29</del>	8:45	a.o44		
		13:45	5.0415	25	
		16:45	0.64[5		
Pit D -12-2021	-12-2021	9:10			
		14:10			
137 Pit B -12-2	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	-12-2021	10:15			
		15:15			
WPR 4	29 -12-2021	10:25	7.047	4	
		15:25	० यस्पि	,	
WPR 3	29 -12-2021	10:45	0 %¥S	20 7	
	-	15:45	0.0416 -	4.3	
Pit A	-12-2021	10:55			
		15:55			

Name & Designation Signature Date



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	29 -12-2021	11:05	c.0413	q	
		16:05	0.0416		

<u>Name & Designation</u> <u>Signature</u> <u>Date</u> 29 - 12 - 2021



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	30 -12-2021	8:30	7410.0		
		13:30	6.0417	53	
İ		17:00	21400		
Area B	30 -12-2021	8:45	0.0415		
		13:45	0.0413	2.5	
		16:45	0.8416		
Pit D	-12-2021	9:10			
		14:10			
137 Pit B	-12-2021	9:45	8144		
		14:45	0,0414		
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	-12-2021	10:15			
		15:15			
WPR 4	36 -12-2021	10:25	5140.0	4	
	J-	15:25	4,0414		
WPR 3	30 -12-2021	10:45	T1120, 0	4.3	
	-	15:45	0.0416		
Pit A	-12-2021	10:55			
		15:55			

Name & Designation

<u>Date</u>

30 - 12 - 2021

Field Operator: Laboratory Staff: Checked by: Signature



Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	30 -12-2021	11:05	0.443	9	
		16:05	0.6417		
					-
			·		
					-
					-
					-

Name & Designation

Date

ತೆಂ - 12 - 2021

Field Operator: Laboratory Staff: Checked by: Signature



Contract no. 13/WSD/16

Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Area A	의 -12-2021	8:30	0.0417		
		13:30	0.0416	5.5	
		17:00	7/40.0		
Area B	3। -12 <b>-</b> 2021	8:45	5 بالماني ق		
		13:45	5.0417	2.5	
		16:45	OLONIT		
Pit D	-12-2021	9:10			
		14:10			
137 Pit B	-12-2021	9:45			
		14:45			
WPR 1	-12-2021	10:05			
		15:05			
WPR 2	-12-2021	10:15			
		15:15			
WPR 4	उ। -12-2021	10:25	0.4414	4	
		15:25	140.0		
WPR 3	31 -12-2021	10:45	0.0416	4.3	
		15:45	0.0415	417	
Pit A	-12-2021	10:55			
		15:55			

Name & Designation Signature Date

Field Operator: Laboratory Staff: Checked by: 3 - 12 - 2021



Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

Penta-Ocean - Concentric Joint Venture

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of site: 13/WSD/16 - Mainlaying in Tseung Kwan O

Sampling equipment used:	Dates calibrated
MultiRAE Lite, PGM-6208	6/4/2021
M01C031772	

Sampling Location	Date of Measurement	Sampling time	Monitoring wells/ Surface Gas Emission Carbon Dioxide (%)	Depth (m)	Remark
Pit B	3( -12-2021	11:05	71140.0	9	
		16:05	7 140.0		

<u>Name & Designation</u> <u>Signature</u> <u>Date</u> 31 - 12 - 2021



Appendix K

Complaint Log and Regulatory Compliance Proforma



# **Statistical Summary of Environmental Complaints**

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
01 December 2021 - 31 December 2021	0	3	N/A

#### **Statistical Summary of Environmental Summons**

Reporting Period	Environmental Summons Statistics			
	Frequency	Cumulative	Details	
01 December 2021 - 31 December 2021	0	0	N/A	

### **Statistical Summary of Environmental Prosecution**

Reporting Period Environmental Prosecution Statistics			
	Frequency	Cumulative	Details
01 December 2021 - 31 December 2021	0	0	N/A



Appendix L

Site Inspection Proforma



	Acuity Sustainabi  Unit 1908, Nos. 301-30  Acuity  O: 2333-6823   F: 2333-1316   E: general	ility Consulting Limited 95 Castle Peak Road, Kwai Chung, N.T. (@acuityhk.com   www.acuityhk.com
	Contract no. 13/WSD/16 Mainlaying in Tse	ung Kwan O
	WEEKLY ENVIRONMENTAL INSPECTION	CHECKLIST
	Inspection Date: OZIL 1007 Inspected by: ET: Charles La.  Contractor: salar log	WSD: AM WO'T TAK IEC: MAR
	Inspection Time: 6 30 11 30  Weather Condition  Suncy Fino Divercast Dilezto Sain  Temperature 24 C Huntelity High Moderate  Wind Calm Hight Brozze Strong	Storm I lazy
		N/A Yes No Photo/Remarks
	O.00 General     O.01 Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	
5	0.02 Is ET Leader's log-book kept readily available for inspections?	
	Construction Dust     Are dusty materials, such as excavated materials, building debris and construction materials, and exposed earth surface properly covered to prevent dust emission?	
	1.02 Are screenings, enclosures, water spraying or vacuum cleaning devices provided to dusty construction works for dust suppression?	- Obs (4)
	1.03 Are fumes or smoke emitting plants or construction activities shielded by a screen?	No fund small
	1.04 Are wheel-washing facilities with high-pressure water jets provided at all site exits?	
	1.05 its wheel-washing provided to all vehicles leaving the site?	
	1.06 Are road section near the site exit free from dusty material?	
	1.07 Are all main haul roads inside the site paved or sprayed with water to minimize dust	pared.
	emission during vehicle movement?  1.08 Are water spraying provided immediately prior to any loading or transfer of dusty materials?	Dbs (4)
	1.09 Are covers provided to all dump trucks carrying dusty materials when entering and leaving the site?	Accione times
	1.10 Are the working areas for uprooting of trees, shrubs, or vegetation or the removal of boulders, poles, pillars sprayed with water to maintain the entire surface wet?	
	1.11 Is exposed earth properly treated within six months after the last construction activity on site?	
	1.12 Does the operation of plants on site free form dark smoke emission?	□ □ □ /€ MEMIN 10601
	0417	
		Page 1 of 6



	Unit 1908, Nos. 301- Aculty 0: 2333-6823   F: 2333-1316   E: gene Sastemability	305 Castle Peak Road, Kwai Chung, N.T. ral@acuityhk.com   www.acuityhk.com
	Contract no. 13/WSD/16 Mainlaying in T	Seung Kwan O
	1	N/A Yes No Photo/Remarks
1.13	Are vehicles travelling at speed not exceeding 15km/hr within the site?	
1	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top and	
1.15	sides?  Are de-bagging, batching and mixing processes of bagged coment carried out in sheltered areas?	0/05(4)
1.16	Are hearding of at least 2.4m high provided along the site boundary adjoining areas accessible by the public?	
1.17	Is open burning prohibited?	
1 000000	Construction Noise (Airborne) Are quiet plants adopted on site?	D D DAMELLE
- 1	Are the PMEs operating on site well-maintained to minimize the generation of excessive niose?	April Labor   Agrillor inspection
2.03	Are plants throttled down or turned off when not in use?	
2.04	Are the plants known to emit noise strongly in one direction oriented to face away from NSRs?	1 1 1 1 Marieto
2.05	Supplementary of the supplemen	D D John new ton
2.06	Are silencers, mufflers and enclosures provided to plants?	
2.07	Are the hoods, cover panels and inspection hatches of PMEs closed during operation?	
2.08	the site boundary?	
2.09	nearby sensitive receivers?	
2.10	Are valid noise emission label(s) affixed to all hand-held breakers operating on site?	
2.11	Are valid noise emission label(s) affixed to all air compressors operating on site?	
2.12	Are all construction noise permit(s) applied for percussive piling work?	
2.13	Are construction noise permit(s) applied for general construction works during restricted nours?	
2.14	Are valid construction noise permit(s) displayed at all vehicular exits?	
3.00	Water Quality Is effluent discharge license obtained for wastewater discharge from site?	
3.0	Is effluent discharged according to the effluent discharge license?	005(3)
3.0	is wastewater discharge from site properly treated prior to discharge?	
6	2412	
		page 2 of



	Acuity Sustainab	05 Castle Pea	ak Road. I	(wal Chu	ing, N.T.
	Acony O: 2333-6823   F: 2333-1316   E: general Sustainability	il@acuityhk.	com   ww	rw.acuit	yhk.com
-	Contract no. 13/WSD/16 Mainlaying in Tse	eung Kwan	Yes	No	Photo/Remarks
	1	470.5			
3.04	Are perimeter channels provided to intercept storm runoff from outside the site?		Z		
3.05	Are sand/silt removal facilities such as sand/silt traps and sediment basins provided to	一		П	
	remove sand/silt particles from runoff?				3
3.06	is surface runoff diverted to sedimentation facilities?			Ш	Olos (A)
3.07	is the drainage system properly maintained?		Ø.		
3.08	Are construction works carefully programmed to minimize soil excavation works during				
3.09	rainy seasons?  Are exposed soil surface protected by paving as soon as possible to reduce the potential of			П	
	soil erosion?				
3.10	Are temporary access roads protected by crushed gravel?				
3,11	Are exposed slope surface properly protected?	Z			
3 12	Is trench excavation avoided in the wet season as far as practicable, or if necessary,				
	backfilled in short sections after excavation?	Ļ		Ш	
3.13	Are open stockpiles of construction materials on site covered by tarpaulin or similar fabric				
3.14	during construction?  Is runoff from wheel-washing facilities avoided?		П	П	
			므	므	
3.15	Is oil leakage or spillage prevented?	Ш	Ш	Ш	063 (5)
3.16	Are there any measures to prevent the release of oil and grease into the storm drainage		П	П	063 (5)
3 17	system?  Are the oil interceptors/ grease traps properly maintained?		一		
				Ш	
3.18	Are debris and rubbish generated on site collected, handled and disposed of properly to avoid them entering the streams?		Z		
3.19	Are all fuel tanks and storage areas provided with locks and be sited on sealed areas,	$\vdash \sqcap$		П	
	within bunds of capacity equal to 110% of the storage capacity of the largest tank?			Ш	
3.20	Are tanks, containers, storage area bunded and the locations locked as far as possible from the sensitive watercourse and stormwater drains?				
3.21	Are sufficient chemical toilets provided on site to handle sewage from construction work	$\vdash \sqcap$		$\Box$	
	force?				
3.22	Are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors?				
3.23	Is concrete washing water properly collected and treated prior to discharge?		П		
4.00				Lauren	
4.01	Is a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at public filling facilities and landfills?				
02	ta.				Page 3 of 6



	(a)	ility Consulting Limited IS Castle Peak Road, Kwai Chung, N.T.
	Acuity 0: 2333-6823   F: 2333-1316   E: general Sustainability	@acuityhk.com   www.acuityhk.com
	Contract no. 13/WSD/16 Mainlaying in Tse	ung Kwan O  N/A Yes No Photo/Remarks
	<b>\</b>	IVA (CS IV
	is a recording system implemented to record the amount of wastes generated, recycled and	
	disposed of?  Is the Contractor registered as a chemical waste producer?	
	Are chemical waste separated from other waste and collected by a licensed chemical waste	
	collector?	4 4 4
4.05	Are trip tickets for chemical waste disposal available for inspection?	
4.06	Is chemical waste reused and recycled on site as far as practicable?	
4.07	Are all containers for chemical waste properly labelled?	
	is chemical waste storage area used solely for storage of chemical waste and properly labelled?	
4.09	Are incompatible chemical wastes stored in different areas?	
4.10	is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?	
4.11	Is an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the	
	largest container or of 20% by volume of the chemical waste stored in that area, whichever is the greatest, provide?	
4.12	Are a routine cleaning and maintenance programme implemented for drainage systems, sump	
4.13	pits, and oil interceptors?  Are sufficient general refuse disposal/collection points provided on site?	
	Is general refuse disposed of properly and regularly?	
4.15	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?	
4.16	Are individual collectors for aluminum cans, plastic bottles and packaging material and office	
4.17	paper provided to encourage waste segregation?  Are C&D wastes sorted on site?	
	B Are C&D waste disposed of properly?	
4.19	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?	
4.20	Are public fill and C&D waste reuse on site as far as practicable to avoid dispasal off-site?	
4.2	1 Are the construction materials stored properly to minimize the potential for damage o	
4.0	contamination?  2 is a dumping license obtained to deliver public fill to public filling areas?	
4.2	2 is a dumping neerise obtained to deliver poorle in to poorle in the	
L		
0)	In.	Page 4 of 6



		Acuity Sustaina							
		Acuity Unit 1908, Nos. 301- Suntamability O: 2333-6823   F: 2333-1316   E: gene							
_	Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O								
		*	N/A	Yes	No	Photo/Remarks			
	-	Landscape and Visual							
5.0		Are Is site hoarding provided?							
5.0	02	Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?	П		П				
5.0	03	Is construction light oriented away from the sensitive receivers?			一				
5.0	04	Is grass hydroseeding provided to slopes as soon as the completion of works?		믐	믐				
6.0	25	Are damages to trees outside site houndary due construction works avoided?		Ц	Ш				
5.0		s excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?		П	П				
5.0		Are the retained and transplanted tree(s) properly protected and in good conditions?							
5.0	08	Are surgery works carried out for damaged trees?							
				Ш					
1		Ec <b>ology</b> s site runoff properly treated to prevent any silly runoff?				1			
6.0	12	Are silt trap installed and well-maintained?		Ш		<u>्रि (३)</u>			
						-			
6.03	3 4	Are stockpiles properly covered to avoid generating silty runoff?							
6.0	4 1	Are construction works restricted to works area which are clearly defined?	П		$\Box$				
		lverall		7					
7.0	1 1	s the EM&A properly implemented in general?							
						Page 5 of 6			



	O: 23	Unit 1908, Nos.	nability Consulting 301-305 Castle Peak Road, Kwa general@acuityhk.com   www.	i Chung, N.T.
1		13/WSD/16 Mainlaying i		
aha.vatio	ip of Observation(s) and Non-co ∽ ξ∫			
III NO PANI	omnental peniftmas	observed at the si	te exit/entrane ad	Pi+&P
(HK. WIS	odiami)			
On alabair	as well as a second At	uplace 1		
on The w	en Cutractor was a His. I win contractor was run	amounted that ho	into chard be do	scharged
(s) Mithor	4 Sweetmont at H.K. 1	All drown Pit O.	be enthum should be	provided for
(4) The N	main continuolor mas ren	whole that is an	Contract White of the	
Kensin	w(s)	: 11 to clean	the trapped dust	
(1) The A	haves, the contractor was a rule of the sedirentation for mater at pet P.	tark to allow ofthe	icitat Pitiraton 87	
9 clamical stail	n was observed at f	NY L		
				7
Signatures:			779 T. (19)	
ET Representativ	Contractor's Representative	WSD's Representative	IEC's Representative	
W	- 1	A	NA	
(Name: Ohi	dune) (Name: San Ng.	) (Name: An Way Talk	) (Name: N/A)	
02/12				
				Page 6 of 6
e e				



	Contract no. 13/WSD/16 Mainlaying in Ts	eung Kwan O
	WEEKLY ENVIRONMENTAL INSPECTION	N CHECKLIST
	on Date: 09-12-26-14 Inspected by: RT: Charlon LAT On Time: 09:50 - 11:40	WSD: Trank kin Fall
Weath Condit		Storm Hazy
Tempe Wind	rature 2 C Humidity High Moderate	e Low
		N/A Yes No Photo/Romarks
	General  Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	
0.02	ls ET Leader's log-book kept readily available for inspections?	
	Construction Dust  Are dusty materials, such as excavated materials, building debris and construction materials, and exposed carth surface properly covered to prevent dust emission?	Obs (2)
1.02	Are screenings, enclosures, water spraying or vacuum cleaning devices provided to dusty construction works for dust suppression?	Water Straying enchances
1.03	Are furnes or smoke emitting plants or construction activities shielded by a screen?	no time smore  another plant  another plant  was constructed
1.04	Are wheel-washing facilities with high-pressure water jets provided at all site exits?	The state of the s
1.05	is wheel-washing provided to all vehicles leaving the site?	
1.05	Are road section near the site exit free from dusty material?	
1.07	Are all main haul roads inside the site paved or sprayed with water to minimize dust emission during vehicle movement?	paved.
1.08	Are water spraying provided immediately prior to any loading or transfer of dusty materials?	
1.09	Are covers provided to all dump trucks carrying dusty materials when entering and leaving the site?	To average the de observed.
1.10	Are the working areas for uprooting of trees, shrubs, or vegetation or the removal of boulders, poles, pillars sprayed with water to maintain the entire surface wet?	
1.11	Is exposed earth properly treated within six months after the last construction activity on site?	
1.12	Does the operation of plants on site free form dark smoke emission?	AKMP4 lube
091	1)	



	Contract no. 13/WSD/16 Mainlaying in Ts				
		N/A	Yes	No	Photo/Remarks
1.13	Are vehicles travelling at speed not exceeding 15km/hr within the site?				
1.14	Are stock of more than 20 bags of centent or day PFA covered or sheltered on top and 3 sides?				
1.15	Are de-bagging, batching and mixing processes of bagged cement carried out in sheltered areas?				
1.16	Are hoarding of at least 2.4m high provided along the site boundary adjoining areas accessible by the public?				
1.17	is open burning prohibited?		Ø		
2.00 2.01	Construction Noise (Airborne)  Are quiet plants adopted on site?		M		/ RIME LAW!
2.02	Are the PMEs operating on site well-maintained to minimize the generation of excessive				position
0.00	niosc?				insportion k maintenance
	Are plants throttled down or turned off when not in use?	Ш		Ш	
2.04	Are the plants known to emit noise strongly in one direction oriented to face away from NSRs?	Z			Provisit to
2.05	Are moveable barriers provided to screen NSRs from plant or noisy operations?				Juan to Msk.
2.06	Are silencers, mufflers and enclosures provided to plants?				
2.07	Are the hoods, cover panels and inspection hatches of PMEs closed during operation?				Name of the last o
2.08	Are purposely-built site hoarding construction with appropriate materials provided along the site boundary?				
2.09	Are noisy operation properly scheduled to minimize exposure and cumulative impacts to nearby sensitive receivers?				
2.10	Are valid noise emission label(s) affixed to all hand-held breakers operating on site?				
2.11	Are valid noise emission label(s) affixed to all air compressors operating on site?				
2.12	Are all construction noise permit(s) applied for percussive pilling work?				
2.13	Are construction noise permit(s) applied for general construction works during restricted hours?				
2.14	Are valid construction noise permit(s) displayed at all vehicular exits?				
	Water Quality				
3.01	Is effluent discharge license obtained for wastewater discharge from site?  Is effluent discharged according to the effluent discharge license?				
			Щ	ᆜ	Obs (3)
3.03	Is wastewater discharge from site properly treated prior to discharge?		Ш	Ш	065(3)



	Acuity Unit 1908, Nos. 301-3 O: 2333-6823   F: 2333-1316   E: general				
	Sustamability U: 2333-0823   F: 2333-1516   E: general Contract no. 13/WSD/16 Mainlaying in Ts				4,1114
	Contract no. 15/ W3D/16 Maintaying in 15	N/A	Yes	No	Photo/Remarks
3.04	Are perimeter channels provided to intercept storm runoff from outside the site?		X		_
3.05	Are sand/silt removal facilities such as sand/silt traps and sediment basins provided to remove sand/silt particles from runoff?				
3.06	Is surface runoff diverted to sedimentation facilities?		П	П	obs(3)
3.07	Is the drainage system properly maintained?				-
0.00					/ <del></del>
3.08	Are construction works carefully programmed to m:nimize soil excavation works during rainy seasons?				/\
3.09	Are exposed soil surface protected by paving as soon as possible to reduce the potential of soil erosion?				065 (2)
3.10	Are temporary access roads protected by crushed grave?			П	
3.11	Are exposed slope surface properly protected?	一	一	H	Obs (1)
3.12	Is trench excavation avoided in the wet season as far as practicable, or if necessary,	H			0/3 (1)
	backfilled in short sections after excavation?	Ш		Ш	,
3.13	Are open stockpiles of construction materials on site covered by tarpaulin or similar fabric during construction?				obs(V)
3.14	Is runoff from wheel-washing facilities avoided?	- []		П	
3.15	Is oil leakage or spillage prevented?	$\overline{\Box}$	7	一	7
				Ш	(drirtrag
3.16	Are there any measures to prevent the release of oil and grease into the storm drainage system?				drir tray
3.17	Are the oil interceptors/grease traps properly maintained?	/			-
3.18	Are debris and rubbish generated on site collected, handled and disposed of properly to	П		П	reminder (1)
3.19	avoid them entering the streams?  Are all fuel tanks and storage areas provided with locks and be sited on scaled areas,				
	within bunds of capacity equal to 110% of the storage capacity of the largest tank?	Ш		Ш	
3.20	Are tanks, containers, storage area bunded and the locations locked as far as possible from the sensitive watercourse and stormwater drains?		Z		
3.21	Are sufficient chemical toilets provided on site to handle sewage from construction work				
	force?			Ш	
3.22	Are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors?				
3.23	Is concrete washing water properly collected and treated prior to discharge?	Ø			
4.00	Waste Management				
4.01	Is a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at public filling facilities and landfills?				
a.			W		
911	L				

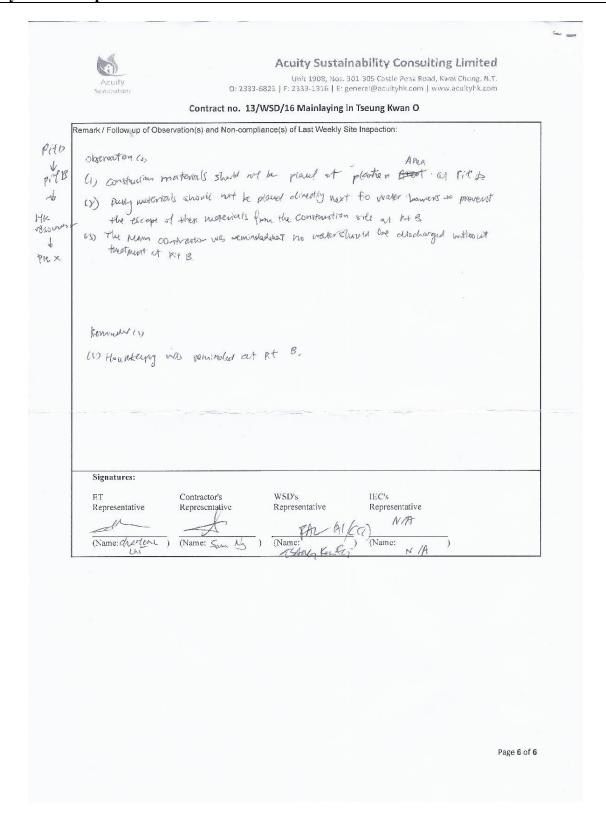


	Acuity Sustainal  Acuity Unit 1908, Nos. 301 3  Acuity Oc. 2333-6823   F: 2333-1316   E: gener	05 Castie F	eak Road	, Kwai Ch	nung, M.T.
	Contract no. 13/WSD/16 Mainlaying in Ts	eung Kwa	ın O		
		N/A	Yes	No	Photo/Remarks
4.02	Is a recording system implemented to record the amount of wastes generated, recycled and tissosed of?	П		П	
4.03			7		
4.04	Are chemical waste separated from office waste and collected by a licensed chemical waste collector?				
4.05	Are trip tickets for chemical waste disposal available for inspection?		П		
4.06	is chemical waste reused and recycled on site as far as practicable?				
4.07	Are all containers for chemical waste properly labelled?				4
4.08	Is chemical waste storage area used solely for storage of chemical waste and properly labelled?				Service Control of the
4.09	Are incompatible chemical wastes stored in different areas?				
4.10	is the chemical waste storage area enclosed on at least 3 sides and adequately yent lated?				
4.11	is an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or of 20% by volume of the chemical waste stored in that area, whichever is the treatest, provide?				
4.12	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?				
4.13	Are sufficient general reduce disposal/collection points provided on site?				
4.14	ls general refuse disposed of properly and regularly?		$\square$		rominder (1
4.15	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?		Ø		****
4.16	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?		Z		
4.17	Are C&D wastes sorted on site?		Ø		<b>X</b>
4.18	Are C&D waste disposed of properly?		Z		
4.19	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?	Z			
4.20	300 - CONTRACTOR (SATE AND SATE				
4.21	Are the construction materials stored properly to minimize the potential for damage or contamination?				# Obs(2)
4.22	is a dumping license obtained to deliver public fill to public filling areas?		Z		19



5.01 Are Is site hoarding provided?  5.02 Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?  5.03 Is construction light oriented away from the sensitive receivers?  5.04 Is grass hydrosecding provided to slopes as soon as the completion of works?  5.05 Are damages to trees outside site boundary due construction works avoided?  5.06 Is excevation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?  5.07 Are the retained and transplanted tree(s) properly protected and in good conditions?  6.08 Are surgery works carried out for damaged trees?  6.00 Ecology  6.01 Is site runoff properly treated to prevent any silly runoff?  6.02 Are silt trap installed and well-maintained?		Actify Unit 1908, Nos. 301-3 Sustamebility 0: 2333-6823   F: 2333-1316   E: gener				
5.00 Landscape and Visual 5.01 Are Is site hoarding provided? 5.02 Are vegetation disturbance minimized or soil protected to reduce potential soil erosion? 5.03 Is construction light oriented away from the sensitive receivers? 5.04 Is grass hydroseeding provided to slopes as soon as the completion of works? 5.05 Are damages to trees outside site boundary due construction works avoided? 5.06 Is excevetion works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees? 5.07 Are the retained and transplantice tree(s) properly protected and in good conditions? 5.08 Are surgery works carried out for damaged trees? 5.09 Lecology 6.01 Is site runoff properly treated to prevent any silly runoff? 6.02 Are sill trap installed and well-maintained? 5.03 Are stockpiles properly covered to avoid generating silly runoff? 6.04 Are construction works restricted to works area which are clearly defined? 7.00 Overall 15 the EM&A properly implemented in general?		Contract no. 13/WSD/16 Mainlaying in Ts		The state of the s		
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5.02 Are vegetation disturbance minimized or soil protected to reduce potential soil erosion?  5.03 Is construction light oriented away from the sensitive receivers?  5.04 Is grass hydrosceding provided to slopes as soon as the completion of works?  5.05 Are damages to trees outside site boundary due construction works avoided?  5.06 Is excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?  5.07 Are the relatined and transplanted tree(s) properly protected and in good conditions?  5.08 Are surgery works carried out for damaged trees?  6.00 Ecology  6.01 Is site runoff properly treated to prevent any stilly runoff?  6.02 Are still trup installed and well-maintained?  6.03 Are stockpiles properly covered to avoid generating stilly runoff?  6.04 Are construction works restricted to works area which are clearly defined?  7.00 Overall  7.01 Is the EM&A properly implemented in general?	5.00	Landscape and Visual				
5.03 Is construction light oriented away from the sensitive receivers?  5.04 Is grass hydrosceding provided to slopes as soon as the completion of works?  5.05 Are damages to trees outside site boundary due construction works avoided?  5.06 Is excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved frees?  5.07 Are the relatined and transplanted tree(s) properly protected and in good conditions?  5.08 Are surgery works carried out for damaged trees?  6.00 Ecology  6.01 Is site runoff properly treated to prevent any silly runoff?  6.02 Are silt trap installed and well-maintained?  6.03 Are stockpiles properly covered to avoid generating silty runoff?  6.04 Are construction works restricted to works area which are clearly defined?  7.00 Overall  7.01 Is the EM&A properly implemented in general?	5.01	Are Is site hoarding provided?				
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6.00 Ecology 6.01 Is site runoff properly treated to prevent any silly runoff?  6.02 Are silt trap installed and well-maintained?  6.03 Are stockpiles properly covered to avoid generating silty runoff?  6.04 Are construction works restricted to works area which are clearly defined?  7.00 Overall 7.01 Is the EM&A properly implemented in general?	5.07	Are the retained and transplanted tree(s) properly protected and in good conditions?				
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6.02 Are silt trap installed and well-maintained?  3.03 Are stockpiles properly covered to avoid generating silty runoff?  6.04 Are construction works restricted to works area which are clearly defined?  7.00 Overall  7.01 Is the EM&A properly implemented in general?	6.00	Ecology	2			
6.02 Are silt trup installed and well-maintained?  3.03 Are stockpiles properly covered to avoid generating silty runoff?  6.04 Are construction works restricted to works area which are clearly defined?  7.00 Overall  7.01 Is the EM&A properly implemented in general?	6.01	is site runoff properly treated to prevent any silly runoff?	П		П	01.770
5.03 Are stockpiles properly covered to avoid generating silty runoff?  6.04 Are construction works restricted to works area which are clearly defined?  7.00 Overall  7.01 Is the EM&A properly implemented in general?	6.02	Are silt tran installed and well-maintained?		ᆜ	믐	(107-27
7.00 Overall To the EM&A properly implemented in general?	0.02	and the months and the minutes.		Ш		
6.04 Are construction works restricted to works area which are clearly defined?  7.00 Overall  7.01 Is the EM&A properly implemented in general?	6.03	Are stockpiles properly covered to avoid generating silty runoff?	П		П	abeles
7.00 Overall 7.01 Is the EM&A properly implemented in general?	6.04	Are construction works restricted to works area which are clearly defined?				Do2 c
7.01 Is the EM&A properly implemented in general?		A contraction to the companion when the contraction is the contraction of the contraction	Ш		Ш	
	1,000	E STATE OF THE STA		-/-		
4112	7.01	Is the EM&A properly implemented in general?			Ш	
	0911	L				







		305 Castle Peak Road, Kwai Chung, N.T. ral@acuityhk.com   www.acuityhk.com
	Contract no. 13/WSD/16 Mainlaying in To	seung Kwan O
	WEEKLY ENVIRONMENTAL INSPECTION	
Inspect		WSD: BR CE EC: N/A
Weath Condi Tempi Wind		Storm Hazy te Low
		N/A Yes No Photo/Remarks
0.00	General  Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	Obs (1)
0.02	is ET Leader's log-book kept readily available for inspections?	
300000	Construction Dust  Are dusty materials, such as excavated materials, building debris and construction materials, and expoxed earth surface properly covered to prevent dust emission?	Rusy contents  Were beginned  What duri
1.02	Are screenings, enclosures, water spraying or vacuum cleaning devices provided to dusty construction works for dust suppression?	No duty contention was shared.
1.03	Are furnes or smoke emitting plants or construction activities shielded by a screen?	No function active observed.
1.04	Are wheel-washing facilities with high-pressure water jets provided at all site exits?	
1.05	is wheel-washing provided to all vehicles leaving the site?	
1.06	Are road section near the site exit free from dusty material?	
1.07	Are all main haul roads inside the site paved or sprayed with water to minimize dust emission during vehicle movement?	haved.
1.08	Are water spraying provided immediately prior to any loading or transfer of dusty materials?	No loading/ thought of dusts
1.09	Are covers provided to all dump trucks carrying dusty materials when entering and leaving the site?	no amp fine
1.10	Are the working areas for uprooting of trees, shrubs, or vegetation or the removal of boulders, poles, pillars sprayed with water to maintain the entire surface wet?	
1.11	Is exposed earth properly treated within six months after the last construction activity on site?	
1.12	Does the operation of plants on site free form dark smoke emission?	NFMM labor
(	6112	



	Acuity Sustainal	oility C	onsult	ing Li	imited
	Acuity Unit 1908, Nos. 301-3				
	Sustainability O: 2333-6823   F: 2333-1316   E: gener	al@acuityr	ik.com   v	vww.acu	utynk.com
	Contract no. 13/WSD/16 Mainlaying in Ts	eung Kwa N/A	an O Yes	No	Photo/Remarks
		1071	165	110	1 hoto/techacks
1.13	Are vehicles travelling at speed not exceeding 15km/hr within the site?				
1.14	Are stock of more than 20 bags of coment or day PFA covered or sheltered on top and 3 sides?				
1.15	Are de-bagging, batching and mixing processes of bagged cement carried out in sheltered areas?				
1.16	Are hoarding of at least 2.4m high provided along the site boundary adjoining areas accessible by the public?				\(\frac{1}{2}\)
1.17	is open burning prohibited?		Z		
2.00	Construction Noise (Airborne)				
	Are quiet plants adopted on site?				(OTME lase)
2.02	Are the PMEs operating on site well-maintained to minimize the generation of excessive niose?		2		Regular
2.03	Are plants throttled down or turned off when not in use?				
2.04	Are the plants known to emit noise strongly in one direction oriented to face away from NSRs?				7 m visit to m
2.05	Are moveable barriers provided to screen NSRs from plant or noisy operations?				marti
2.06	Are silencers, mufflers and enclosures provided to plants?				
2.07	Are the hoods, cover panels and inspection hatches of PMEs closed during operation?				-
2.08	Are purposely-built site hoarding construction with appropriate materials provided along the site boundary?				
2.09	Are noisy operation properly scheduled to minimize exposure and cumulative impacts to nearby sensitive receivers?				
2.10	Are valid noise emission label(s) affixed to all hand-held breakers operating on site?	Ø			
2.11	Are valid noise emission label(s) affixed to all air compressors operating on site?		- Dh		-
	Are all construction noise permit(s) applied for percussive piling work?	×			
2.13	Are construction noise permit(s) applied for general construction works during restricted hours?				-
2.14	Are valid construction noise permit(s) displayed at all vehicular exits?				
3.00 3.01	Water Quality Is effluent discharge license obtained for wastewater discharge from site?				
3.02	Is effluent discharged according to the effluent discharge license?				Wy water
3.03	Is wastewater discharge from site properly treated prior to discharge?	T	П	П	)

Page 2 of 6



	Acuity Unit 1908, Nos. 301-3 Sustamability O: 2333-6823 [ F: 2333-1316 ] E: general				
	Contract no. 13/WSD/16 Mainlaying in Ts	CONTRACTOR OF THE PARTY OF THE			W . M
		N/A	v'es	No	Photo/Remarks
3.04	Are perimeter channels provided to intercept storm runoff from outside the site?		7		
3.06	Are sand/silt removal facilities such as sand/silt traps and sediment basins provided to remove sand/silt particles from runoff?		XX		No water
3.06	Is surface runoII diverted to sedimentation facilities?				woo discharged
3.07	is the drainage system properly maintained?		7		
3.08	Are construction works carefully programmed to minimize soil excavation works during rainy seasons?		2		
3.09	Are exposed soil surface protected by paving as soon as possible to reduce the potential of soil erosion?		Z		
3.10	Are temporary access roads protected by crushed gravel?		2		Procedure and the second secon
3.11	Are exposed slope surface properly protected?	ywy [	Z		
3.12	Is trench excavation avoided in the wet season as far as practicable, or if necessary, backfilled in short sections after excavation?		/		
3.13	Are open stockpiles of construction materials on site covered by tarpaulin or similar fabric during construction?		/		
3.14	Is runoff from wheel-washing facilities avoided?	M			
3.15	Is oil leakage or spillage prevented?				abs(1)
3.16	Are there any measures to prevent the release of oil and grease into the storm drainage system?				obs(1)
3.17	Are the oil interceptors/ grease traps properly maintained?				
3.18	Are debris and rubbish generated on site collected, handled and disposed of properly to avoid them entering the streams?		7		Permister (V
3.19	Are all fuel tanks and storage areas provided with locks and be sited on scaled areas, within bunds of capacity equal to 110% of the storage capacity of the largest tank?		<b>/</b>		
3.20	Are tamks, containers, storage area bunded and the locations locked as far as possible from the sensitive watercourse and stormwater drains?		7		
3.21	Are sufficient chemical toilets provided on site to handle sewage from construction work force?		7		
3.22	Are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors?		Z		
3.23	is concrete washing water properly collected and treated prior to discharge?	$\square$			
	Waste Management				
4.01	is a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at public filling facilities and landfills?		7		
U	112				



# Acuity

### **Acuity Sustainability Consulting Limited**

Unit 1908, Nos. 301-305 Castle Peak Road, Kwai Chung, N.T. O: 2333-6823 | F: 2333-1316 | E: general@acultyhk.com | www.acultyhk.com

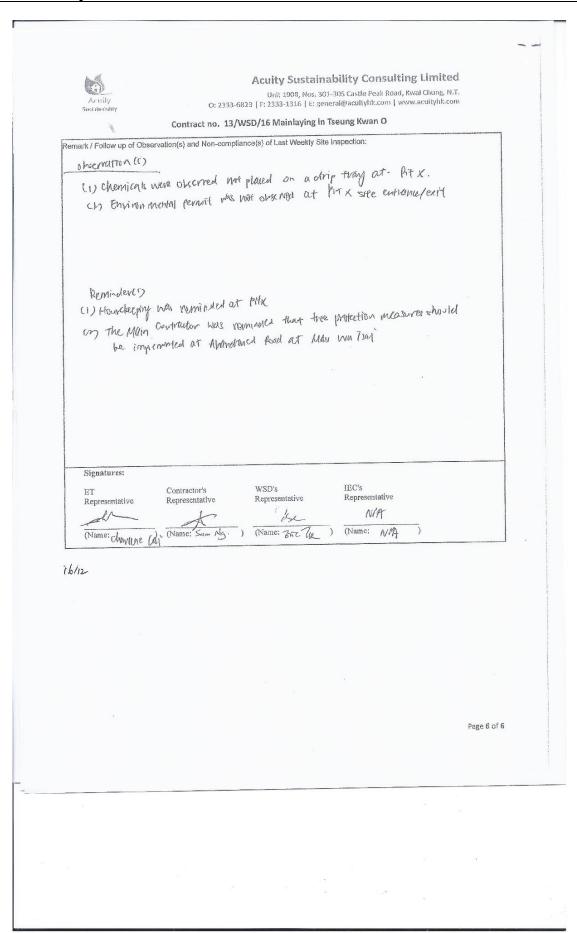
	1	N/A	Yes	No	Photo/Remarks
.02	is a recording system implemented to record the amount of wastes generated, recycled and disposed of?				
.03	Is the Contractor registered as a chemical waste producer?				
.04	Are chemical waste separated from other waste and collected by a licensed chemical waste collector?				
.05	Are trip tickets for chemical waste disposal available for inspection?				
.06	Is chemical waste roused and recycled on site as far as practicable?	2			
1.07	Are all containers for chemical waste properly labelled?				
80.4	is chemical waste storage area used solely for s.orage of chemical waste and properly labelled?				
1.09	Arc incompatible chemical wastes stored in different areas?				
1.10	is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?				
1.11	is an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or of 20% by volume of the chemical waste stored in that area, whichever is the greatest, provide?	П			-
1.12	Are a roctine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?				remoder (V
1.13	Are sufficient general refuse disposal/collection points provided on site?				
1.14	is general refuse disposeć of properly and regulatly?		Z		-
1.15	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?				
1.16	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?				
1.17	Are C&D wastes sorted on site?				N
1.18	Are C&I) waste disposed of property?				
1.19	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?	Ø			Name and
1.20	Are public fill and C&D waste reuse on site as far as practicable to avoid disposal off-site?		Ø		
1.21	Are the construction materials stored properly to minimize the potential for damage or contamination?				own
.22	ls a dumping license obtained to deliver public fill to public filling areas?				74

Page 4 of 6



	Acuity Unit 1908, Nos. 301-305 Castle Peak Road, Kwai Chung, N.T. Sumainability O: 2333-6823   F: 2333-1316   E: general@acuityhk.com   www.acuityhk.com							
Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O								
		N/A	Yes	No	Photo/Remarks			
5.00	Landscape and Visual		***************************************					
5.01	Are Is site hourding provided?				NATIONAL PROPERTY AND ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY AND ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY AND ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY			
5.02	Are vegetation disturbance minimized or soil protected to reduce potential soil crosion?				reminder on			
5.03	s construction light oriented away from the sensitive receivers?							
5.04	is grass hydroseeding provided to slopes as soon as the completion of works?							
5.05	Are damages to trees outside site boundary due construction works avoided?				remindle in			
5.06	is excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?				***************************************			
5.07	Are the retained and transplanted tree(a) properly protected and in good conditions?				reminderin			
5.08	Are sungery works carried out for damaged trees?							
5.00	Ecology							
6.01	is site runoff properly treated to prevent any silly runoff?				Morate as			
6.02	Arc silt trap installed and well-maintained?				- 113 (69)			
3.03	Are stockpiles properly covered to avoid generating silty runoff?		Ø					
6.04	Are construction works restricted to works area which are clearly defined?		D					
	Overall s the EM&A properly implemented in general?	П	N	П				
1/12		lana de la constanta de la con	<u> </u>					









Unit 1908, Nos. 301-305 Castle Peak Road, Kwai Chung, N.T. O: 2333-6823 | F: 2333-1316 | E: general@acuityhk.com | www.acuityhk.com

#### Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

#### WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST

	on Plate: 25/12/201 Inspected by: ET: Charleng Let.	WSD Yip Chi Kenny
-	on Time: 0(10) - 12:00	
Wenth		Stonn
Tempe Wind	rature 2 C Humidity High Medera	Low
		N/A Yes No Photo/Remarks
0.00	General	
0.01	Is the current Environmental Permit displayed conspicuously at all vehicle site entrances/exits for public's information at any time?	
0.02	Is ET Leader's log-book kept readily available for inspections?	
1.00	Construction Dust	pusty waterful
1.01	Are dusty materials, such as excavated materials, building debris and construction materials, and exposed earth surface properly covered to prevent dust emission?	West to form taken
1.02	Are screenings, enclosures, water spraying or vacuum cleaning devices provided to dusty	No drety
	construction works for dust suppression?	lenguation with men objection and personal as
1.03	Are fumes or smoke emitting plants or construction activities shielded by a screen?	notional famile
1.04	Are wheel-washing facilities with high-pressure water jets provided at all site exits?	
1.05	Is wheel-washing provided to all vehicles leaving the site?	
1.06	Are road section near the site exit free from dusty material?	
1.07	Are all main haul roads inside the site paved or sprayed with water to minimize dust emission during vehicle movement?	paved.
1.08	Are water spraying provided immediately prior to any loading or transfer of dusty materials?	material and the
1.09	Are covers provided to all dump trucks carrying dusty materials when entering and leaving the site?	No dump thouse
1.10	Are the working areas for uprooting of trees, shruhs, or vegetation or the removal of boulders, poles, pillars sprayed with water to maintain the entire surface wet?	
1.11	Is exposed earth properly treated within six months after the last construction activity on site?	
1.12	Does the operation of plants on site free form dark smoke emission?	Mr. War loom

23/12

Page 1 of 6





Unit 1908, Nos. 301-305 Castle Peak Road, Kwai Chung, N.T. O: 2333-6823 | F: 2333-1316 | E: generai@acuityhk.com | www.acuityhk.com

	Contract no. 13/WSD/16 Mainlaying in Ts	N/A	Yes	No	Photo/Remarks
					110001001100
1.13	Are vehicles travelling at speed not exceeding 15km/hr within the site?		$\overline{}$		
	1				-
.14	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top and 3				
	sides?				
1.15	Are dc-hagging, batching and mixing processes of hagged cement carried out in sheltered	7			
	areas?				
.16	Are hoarding of at least 2.4m high provided along the site boundary adjoining areas	1			•
	accessible by the public?				-
1.17	Is open burning prohibited?				
	100				
2.00	Construction Noise (Airborne)		1		1040 000 0
2.01	Are quiet plants adopted on site?				[noise larber
2.02	Are the PMEs operating on site well-maintained to minimize the generation of excessive				
	niose?		1		Megican
2.03	Are plants throttled down or turned off when not in use?		7		
2.04	Are the plants known to emit noise strongly in one direction oriented to face away from	7			1 pro writte
	NSRs?				Grante portion
2.05	Are moveable barriers provided to screen NSRs from plant or noisy operations?	7			Cico to No
.06	Are silencers, mufflers and enclosures provided to plants?	7	П		
2.07	Are the hoods, cover panels and inspection hatches of PMEs closed during operation?	<del>4</del>	$\equiv$		
	personal annual		X		
80.9	Are purposely-built site hoarding construction with appropriate materials provided along				
	the site boundary?		-		
.09	Are noisy operation properly scheduled to minimize exposure and cumulative impacts to		1		
	nearby sensitive receivers?				
.10	Are valid noise emission label(s) affixed to all hand-held breakers operating on site?	7			
.11	Associated major combination 1-1-1-1-1-2 (Co. 14 III	4		Ш	
	Are valid noise emission label(s) affixed to all air compressors operating on site?				
.12	Are all construction noise permit(s) applied for percussive piling work?		7		
			4		
- 1	Are construction noise permit(s) applied for general construction works during restricted		1		
_	nours?				
.14	Are valid construction noise permit(s) displayed at all vehicular exits?				
.00	Water Quality				
.01	is effluent discharge license obtained for wastewater discharge from site?		$\square$		
1.02	lo official distribution of a state of a first of a fir		$\Box$	Ш	5
.02	s effluent discharged according to the effluent discharge license?				1 Dichoge
.03	s wastewater discharge from site properly treated prior to discharge?	==			shund

13/12

Page 2 of 6





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Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O							
		N/A	Yes	No	Photo/Remarks		
3.04	Are perimeter channels provided to intercept storm runoff from outside the site?						
3.05	Are sand/silt removal facilities such as sand/silt traps and sediment busins provided to remove sand/silt particles from runoff?				No work disdre		
3.06	Is surface runoff diverted to sedimentation facilities?						
3.07	Is the drainage system properly maintained?						
3.08	Are construction works carefully programmed to minimize soil excavation works during rainy seasons?	П	7				
3.09	Are exposed soil surface protected by paving as soon as possible to reduce the potential of						
	soil erosion?			Ш			
3.10	Are temporary access roads protected by crushed gravel?						
3.11	Arc exposed slope surface properly protected?						
3.12	Is trench excavation avoided in the wet season as far as practicable, or if necessary,						
40	backfilled in short sections after excavation?						
.13	Are open stockpiles of construction materials on site covered by tarpaulin or similar fabric during construction?						
3.14	Is runoff from wheel-washing facilities avoided?						
3.15	ts oil leakage or spillage prevented?	П	П	П	Peninder (1)		
.16	Are there any measures to prevent the release of oil and grease into the storm drainage		$\overline{\Box}$	$\overline{\Box}$	reminderery		
	system?		با	Ш	- Condition		
3.17	Are the oil interceptors/ grease traps properly maintained?	H					
	Are debris and rubbish generated on site collected, handled and disposed of properly to avoid them entering the streams?						
	Are all fuel tanks and storage areas provided with locks and be sited on scaled areas,		7				
_	within bunds of capacity equal to 110% of the storage capacity of the largest tank?  Are tanks, containers, storage area bunded and the locations locked as far as possible from			_			
- 1	the sensitive watercourse and stormwater drains?						
- 1	Are sufficient chemical toilets provided on site to handle sewage from construction work force?		Z				
	Are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors?	П	1	П			
	Is concrete washing water properly collected and treated prior to discharge?	7					
.00	Waste Management						
1.01	is a trip-licket system implemented to monitor the disposal of C&D and solid wastes at public filling facilities and landfills?						

23/12

Page 3 of 6





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	Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O								
		N/A	Yes	No	Photo/Remarks				
4.02	is a recording system implemented to record the amount of wastes generated, recycled and disposed of?								
4.03	s the Contractor registered as a chemical waste producer?		7	-					
4.04	Are chemical waste separated from other waste and collected by a licensed chemical waste collector?								
4.05	Are trip tickets for chemical waste disposal available for inspection?								
4.06	is chemical waste reused and recycled on site as far as practicable?								
4.07	Are all containers for chemical waste properly labelled!		Z						
4.08	is chemical waste storage area used solely for storage of chemical waste and properly labelled?								
4.09	Are incompetible chemical wastes stored in different areas?								
4.10	is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?								
4.11	is an impermeable floor and bunding, of espacity to accommodate 110% of the volume of the largest container or of 20% by volume of the chemical waste stored in that area, whichever is the preatest, provide?								
4.12	Are a routine cleaning and mainlenance programme implemented for drainage systems, sump pits, and oil interceptors?		D,						
4.13	Are sufficient general refuse disposal/collection points provided on site?								
4.14	is general refuse disposed of properly and regularly?								
4.15	Are appropriate measures adopted to minimize windblown litter and dust during transportation of suste?								
4.16	Are individual collectors for aluminum cans, plastic bottles and packaging material and office ager provided to encourage waste segregation?								
4.17	Are C.&D wastes sorted on site?								
4.18	Arc C&D waste disposed of property?								
4.19	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?								
4.20	Are public fill and C&D waste reuse on site as far as practicable to avoid disposal off-site?								
4.21	Are the construction materials stored properly to minimize the potential for damage or contamination?				reminder(1)				
4.22	ls a dumping livense obtained to deliver public fill to public filling areas?		1						

21/12

Page 4 of 6





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# Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O 5.00 Landscape and Visual 5.01 Are Is site hoarding provided? 5.02 Are vegetation disturbance minimized or soil protected to reduce potential soil crosion? 5.03 Is construction light oriented away from the sensitive receivers? 5.04 Is grass hydrosceding provided to slopes as soon as the completion of works? 5.05 Are damages to trees outside site boundary due construction works avoided? 5.06 Is excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees? 5.07 Are the retained and transplanted tree(s) properly protected and in good conditions? 5.08 Are surgery works carried out for damaged trees? 6.00 Ecology no waterness discharged 6.01 Is site runoff properly treated to prevent any silly runoff? 6.02 Are silt trap installed and well-maintained? 6.03 Are stockpiles properly covered to avoid generating silty runoff? 6.04 Are construction works restricted to works area which are clearly defined? 7.00 Overall 7.01 Is the EM&A properly implemented in general?

23/12

Page 5 of 6





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#### Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O

ark / Follow up of Obser	rvation(s) and Non-com	pliance(s) of Last Wee	kly Site Inspection:	
Lycovation (1)	Remindents			
(1) chemicals was	re should be pl	oud on a drip	thy to prevent ac	uderital leakage.
at War Wu	Tsay Alandoned	ROAD.		
observa	ition (1)			
MIC.				
Signatures:				
ET	Contractor's	WSD's	IEC's	
Representative	Representative	Representative	Representative	
	T	) (Name: To O	44	

Page 6 of 6

23/12



		ability Consulting Limited
		II-305 Castle Peak Road, Kwai Chung, N.T. neral@acuityhk.com   www.acuityhk.com
	Contract no. 13/WSD/16 Mainlaying in	
	WEEKLY ENVIRONMENTAL INSPECTION	ON CHECKLIST
	100000	
	on Date: 29/12/207 Inspected by: ET: Off VISUE U	WSD. Tony Em faj
Inspect Weath		
Condit	on Sunry Fine Dvercast Drizzle Rain	Storm Hazy
Tempe	rature 21 C Humidity High Mod	erate Low
Wind	Chim Light Breeze Strong	
_		N/A Yes No Photo/Remar
		N/A Yes No Photo/Remar
2000	General	
0.01	Is the current Environmental Permit displayed conspicuously at all vehicle site	
0.02	entrances/exits for public's information at any time?  Is ET Leader's log-book kept readily available for inspections?	
0.02	SET LOCAL TO SEARCH PARTIES OF THE SEARCH SERVICES	
1.00	Construction Dust	
1.01	Are dusty materials, such as excavated materials, building debris and construction	
	materials, and exposed earth surface properly covered to prevent dust emission?	
1.02	Are screenings, enclosures, water spraying or vacuum cleaning devices provided to dusty	Sinemir Sinemir
	construction works for dust suppression?	
1.03	Are fumes or smoke emitting plants or construction activities shielded by a sercen?	Moline
		emitting Ho.
		Carthity
1.04	Are wheel-washing facilities with high-pressure water jets provided at all site exits?	ИПП
1.05	s wheel-washing provided to all vehicles leaving the site?	
	-	
1.06	Are road section near the site exit free from dusty material?	
1.07	Are all main haul roads inside the site paved or sprayed with water to minimize dust	
	emission during vehicle movement?	gaved.
	Are water spraying provided immediately prior to any loading or transfer of dusty	ИПП
	naterials?	
	Are covers provided to all dump trucks carrying dusty materials when entering and caving the site?	M oury
	Are the working areas for uproofing of trees, shrubs, or vegetation or the removal of	
	oulders, poles, pillars sprayed with water to maintain the entire surface wet?	
1.11	s exposed earth properly treated within six months after the last construction activity on ite?	

Page 1 of 6

19/12





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	Contract no. 13/WSD/16 Mainlaying in Ts	eung Kwa	n O		
		N/A	Yes	No	Photo/Remarks
1.13	Are vehicles travelling at speed not exceeding 15km/hr within the site?				
1.14	Are stock of more than 20 bags of cement or day PFA covered or sheltered on top and 3 sides?		1	7	
1.15	Are de-bagging, batching and mixing processes of bagged cement carried out in sheltered areas?		2		
1.16	Are hoarding of at least 2.4m high provided along the site boundary adjoining areas accessible by the public?				
1.17	Is open burning prohibited?				
2.00	Construction Noise (Airborne)				
2.01	Are quiet plants adopted on site?				/ armelall
2.02	Are the PMEs operating on site well-maintained to minimize the generation of excessive niose?				meintennu
2.03	Are plunts throttled down or turned off when not in use?				
2.04	Are the plants known to emit noise strongly in one direction oriented to face away from				7 201 40
	NSRs?				must to
2.05	Are moveable barriers provided to screen NSRs from plant or noisy operations?				Shert is new to
2.06	Are silencers, mufflers and enclosures provided to plants?	Ø			
2.07	Are the hoods, cover panels and inspection hatches of PMEs closed during operation?				
2.08	Are purposely-built site hoarding construction with appropriate materials provided along the site boundary?	T.			
2.09	Are noisy operation properly scheduled to minimize exposure and cumulative impacts to nearby sensitive receivers?				
2.10	Are valid noise emission label(s) affixed to all hand-held breakers operating on site?				
2.11	Are valid noise emission label(s) affixed to all air compressors operating on site?				
2.12	Are all construction noise permit(s) applied for percussive piling work?				
2.13	Are construction noise permit(s) applied for general construction works during restricted hours?				
2.14	Are valid construction noise permit(s) displayed at all vehicular exits?				
3.00	Water Quality				
3.01	Is effluent discharge license obtained for wastewater discharge from site?		$\square$		
3.02	Is effluent discharged according to the effluent discharge license?		Ø		
3.03	ts wastewater discharge from site properly treated prior to discharge?		Ø		

29/12

Page 2 of 6





Unit 1908, Nos. 301-305 Castle Peak Road, Kwai Chung, N.T. O: 2333-6823 | F: 2333-1316 | E: general@acuityhk.com | www.acuityhk.com

	Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O							
		N/A	Yes	No	Photo/Remarks			
	Are perimeter channels provided to intercept storm runoff from outside the site?	$\Box$	Ø		06(12)			
3.05	Are sand/silt removal facilities such as sand/silt traps and sediment basins provided to	1		一三				
	remove sand/silt particles from runoff?							
3.06	Is surface runoff diverted to sedimentation facilities?							
3.07	Is the drainage system properly maintained?		W.		065(1)			
3.08	Are construction works carefully programmed to minimize soil excavation works during ainy seasons?							
3.09	Are exposed soil surface protected by paving as soon as possible to reduce the potential of soil erosion?	一	Ħ	$\overline{\Box}$				
3.10	Are temporary access roads protected by crushed gravel?			$\overline{\Box}$				
	Are exposed slope surface properly protected?							
	Is trench excavation avoided in the wet season as far as practicable, or if necessary, backfilled in short sections after excavation?		Ø					
	Are open stockpiles of construction materials on site covered by tarpaulin or similar fabric during construction?							
	Is runoff from wheel-washing facilities avoided?							
	Is oil leakage or spillage prevented?				264(4)			
	Are there any measures to prevent the release of oil and grease into the storm drainage system?				obs (4)			
	Are the oil inferceptors/ grease traps properly maintained?							
ŀ	Are debris and rubbish generated on site collected, handled and disposed of properly to avoid them entering the streams?		Ø		reminder(1)			
	Are all fuel tanks and storage areas provided with locks and he sited on sealed areas, within bunds of capacity equal to 110% of the storage capacity of the largest tank?	J.	Z					
3.20	tre tanks, containers, storage area bunded and the locations locked as far as possible front he sensitive watercourse and stormwater drains?							
3.21	are sufficient chemical toilets provided on site to handle sewage from construction work proc?		7					
	are sewage disposal and toilet maintenance of the portable chemical toilets provided by the licensed contractors?		П					
	concrete washing water properly collected and treated prior to discharge?							
.01 Is	vaste Management  a trip-ticket system implemented to monitor the disposal of C&D and solid wastes at public lling facilities and landfills?							

29/12

Page 3 of 6





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	Contract no. 13/WSD/16 Mainlaying in Tseung Kwan O							
		N/A	Yes	No	Photo/Remarks			
4.02	is a recording system implemented to record the amount of wastes generated, recycled and disposed of?		Ø					
4.03	s the Contractor registered as a chemical waste producer?							
4.04	Are chemical waste separated from other waste and collected by a licensed chemical waste collector?							
4.05	Are trip tickets for chemical waste disposal available for inspection?				*			
4.06	is chemical waste reused and recycled on site as far as practicable?							
4.07	Are all containers for chemical waste properly labelled?	_	Ø					
4.08	is chemical waste storage area used solely for storage of chemical waste and properly labelled?							
4.09	Are incompatible chemical wastes stored in different areas?							
4.10	is the chemical waste storage area enclosed on at least 3 sides and adequately ventilated?		Ø					
4.11	is an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or of 20% by volume of the chemical waste stored in that area, whichever is the greatest, provide?							
4.12	Are a routine cleaning and maintenance programme implemented for drainage systems, sump pits, and oil interceptors?							
4.13	Are sufficient general refuse disposal/collection points provided on site?		Ø					
4.14	is general refuse disposed of properly and regularly?				Moninderly			
4.15	Are appropriate measures adopted to minimize windblown litter and dust during transportation of waste?							
4.16	Are individual collectors for aluminum cans, plastic bottles and packaging material and office paper provided to encourage waste segregation?							
4.17	Are C&D wastes sorted on site?		Ø					
4.18	Arc C&D waste disposed of properly?							
4.19	Are unused C&D materials or chemicals recycled or reused to reduce the quantity of waste?							
4.20	Are public fill and C&D waste reuse on site as far as practicable to avoid disposal off-site?				-			
4.21	Are the construction materials stored properly to minimize the potential for damage or contamination?				abs(4) obs(			
4.22	is a dumping license obtained to deliver public fill to public filling areus?							

29/12

Page 4 of 6





Unit 1908, Nos. 301-305 Castle Peak Road, Kwai Chung, N.T. O: 2333-6823 | F: 2333-1316 | E: general@acuityhk.com | www.acuityhk.com

	Contract no. 13/WSD/16 Mainlaying in Ts	eung Kwa	in O		
		N/A	Yes	No	Photo/Remarks
5.00	Landscape and Visual				
5.01	Are Is site hoarding provided?				
5.02	Are vegetation disturbance minimized or soil protected to reduce potential soil erusion?		Z		
5.03	is construction light oriented away from the sensitive receivers?				· ·
5.04	is grass hydroseeding provided to slopes as soon as the completion of works?	P			
5.05	Are damages to trees outside site boundary due construction works avoided?		Ø		yominder(n)
5.06	ls excavation works carried out manually instead of machinery operation within 2.5m vicinity of any preserved trees?				
5.07	Are the retained and transplanted tree(s) properly protected and in good conditions?		Q		Aminolerty
5.08	Are surgery works carried out for damaged trees?	Z			
6.00	Ecology				
6.01	Is site runoff properly treated to prevent any silly runoff?				
6.02	Are silt trap installed and well-maintained?				
6.03	Are stockpiles properly covered to avoid generating silty runoff?				
6.04	Arc construction works restricted to works area which are clearly defined?		D		
7.00	Overall			2	
7.01	Is the EM&A properly implemented in general?				

2/12

Page 5 of 6





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	Follow up of Obs	ervation(s) and Non-c	compliance(s) of Last Weekly	Site Inspection:	
06:	Servact 13-3				
(1)	Gully Was 1	of protected by	sandlings of geonts	extill at like 42	
				luy at were 2,	3
L (1)	( 415 the line by	smally new to 1	· Dame	wrong in head a soles	*
t3	s, localition,	netriali should	mer be placed on the d	with home on with	
U	4) chemica	i was not	observed planif or	- a drir tray at v	FRZ.
Spi.	minder (1)				
	Mir ata.		2		
(1)	Housekeer's "	as reminded at	Pit D.		
(1)	Housekeeping " The Mein Co.	as reminded at	vincelly to implement to	or prolection measures a	r pit o
(1)	the Mein Co	tractor was rea	vivoled to implement to	or polition measures a learning of trapped c	t Pit D
(1)	the Main Co the Main Ci westernow in	That was really was really water sealing	vivilled to implement to emircled that Equion is ventation law to all	seaning of trapped o	A Pit 0, showing
(1) (4)	the Main Co the Main Ci westernow in	That was really was really water sealing	vivoled to implement to	seaning of trapped o	of Pit D.
(1) (4)	the Main Co the Main Ci westernow in	That was really was really water sealing	vivilled to implement to emircled that Equion is ventation law to all	seaning of trapped o	* P.+ O,
(1) (4)	the Main Co the Main Ci westernow in	That was really was really water sealing	vivilled to implement to emircled that Equion is ventation law to all	seaning of trapped o	t P.+ Q
(1) (4)	the Main Co the Main Ci westernow in	That was really was really water sealing	vivilled to implement to emircled that Equion is ventation law to all	seaning of trapped o	* P.+ D.
(1) (3) (3)	the Main Co the Main Ci westernow in	That was really was really water sealing	vivilled to implement to emircled that Equion is ventation law to all	seaning of trapped o	* P.+ O.
(I) (I) (I) (I) Sig	The Main Co. The Main Co. waterall in filtery of matures:	thator was len addition was r the water selfin wash hater befo	vivilled to implement the eminted that Equien a rentation fact to air we discharge, at Wi	Meaning of trapped of	x P.+ O.
(I) (B) (S)	The Main Co. The Main Co. waterall in filtery of matures:	That was really was really water sealing	vivilled to implement to emircled that Equion is ventation law to all	seaning of trapped o	A P. + O,
(I) (I) (I) Sig	The Main Co. The Main Co. Washing in filterity of 1	thator was lead attactor was refused water selfon water selfon attentions	vivilled to implement the equient to entitle or that requien a air with the discharge, at with the discharge, at with the discharge, at with the discharge, at with the discharge, at with the discharge, at with the discharge, at with the discharge, at with the discharge, at with the discharge, at with the discharge, at with the discharge, at with the discharge, at with the discharge, at with the discharge of the	Meaning of trapped of sold efficient / proper of 2.  IEC's	* P.+ O.

29/12

Page 6 of 6



# Appendix M

Proactive Environmental Protection Proforma



# **Proactive Environmental Protection for the Next Reporting Month**

Reporting Period	Activity	Major Environmental Impact	Environmental Mitigation Measure
1 January 2022 - 31 January 2022	<ul> <li>Excavation of trench</li> <li>Mainlaying of pipe</li> <li>Sheetpiling</li> <li>Backfilling of the trench</li> <li>Work fronts for open trench</li> <li>Work fronts for pipe jacking</li> </ul>	Construction dust and noise generation; construction wastes; impact of water quality	<ul> <li>Dust suppression by regular wetting and water spraying</li> <li>Reduction of noise from equipment and machinery on-site</li> <li>Sorting and storage of general refuse and construction waste</li> <li>Treatment of water with water treatment facilities before discharge</li> </ul>



# Appendix N

Impact Monitoring Schedule of Next Reporting Month (Tentative)

# Contract No. 13/WSD/16 Mainlaying in Tseung Kwan O Monthly EM&A Report No.41



			Jan-22				
Sun	Mon	Tue	Wed	Thu	Fri Sat		
200	7900	100	NEW	1110	71	1	
	3			Noise Impact Monitoring	7	8	
9	10	11	12	13	Noise Impact Monitoring	15	
16	17	18	19	Noise Impact Monitoring	21	22	
		25	Noise Impact Monitoring	27	28	29	
30	31						

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)



Appendix O

Academic Calendar(s)



	_	DE/	\TI\/	E 01	-00	ND/	NDV	SCHOOL CALENDAR 2021-2022	T
	Su	Mo	Tu	We	Th	Fr	Sa	SCHOOL CALENDAR 2021-2022	1
August	15	16	17	18	19	20	21	19-20 Orientation Day	+
August	22	23	24	25	26	27	28	23/08 First School Day	_
				25	20	21	20	25/00 Tilat School Day	+
0	29	30	31	4		•			+
September		_	_	1	2	3	4		-
	5	6	7	8	9	10	11		-
	12	13	14	15	16	17		17/9 Swimming Gala	_
	19	20	21	22	23	24	25	22/9 The following Day of Mid-Autumn Festival	
	26	27	28	29	30			25/9 School Open Day 30/9 1st PD day	
October							2	1/10 National Day of the People's Republic of China	
	3	4	5	6	7	8	9		
	10	11	12	13		15	16	14/10 Chung Yeung Festival	
	17	18	19	20	21	22	23	15-23/10 Term break	
	24	25	26	27	28	29	30		
	31								1
Nevember	31	4	2	2	4	-	_	4/11 University Fair	+
November	7	1	2	3		5	6	4/11 Onliversity Fall	+
		8	9	10	11	12	13	45/44 0 . 1 PD D 40/44 0 1 P	+
<del>                                     </del>	14	15	16	17	18	19	20	15/11 2nd PD Day, 19/11 Sports Day	+
<b>  </b>	21	22	23	24	25	26	27		-
ļļ_	28	29	30						4
December				1	2	3	4		
	5	6	7	8	9	10	11	11/12 Musical Performance	
	12	13	14	15	16	17	18	17/12 Creative Christmas Festival	
	19	20	21	22	23	24	25	25/12 Christmas Holiday. 20/12-3/1 Christmas & New Year Holiday	
<del>                                     </del>	26	27	28	29	30	31		27/12 The first weekday after Christmas Day	1
January							1	1/1 New Year's Day	1
ournery	2	3	4	5	6	7	8		1
<del>                                     </del>		_							+
	9	10	11	12	13	14	15		_
	16	17	18	19	20	21	22		+
	23	24	25	26	27	28	29	28/1 Creative Chinese Festival	-
	30	31							
February			- 1	2	3	4	<u>5</u>	1-3/2 Chinese Lunar New Year	
	6	7	8	9	10	11	12	31/1-9/2 Chinese Lunar New Year Holiday	
	13	14	15	16	17	18	19		
	20	21	22	23	24	25	26		
	27	28							1
March	21	20	1	2	3	4	5		+
IVIAICH		-							_
	6	7	8	9	10	11	12	40.40/0.00 // 197.1	+
	13	14	15	16	17	18	19	12-19/3 Creative Week	+
	20	21	22	23	24	25	26		
	27	28	29	30	31				
April						1	2		
	3	4	5	6	7	8	9	5/4 Ching Ming Festival	
	10	11	12	13	14		16	15/4 Good Friday. 16/4 Holy Saturday	
	17		19	20	21	22	23	18/4 Easter Monday.15/4-22/4 Easter Holiday.	
	24	25	26	27	28	29	30	25/4-03/05 HKDSE Core subjects Exam	
May	- 1	2	8	4	5	6	7	2/5 Labour Day	1
,	8	9	10	11	12	13	14	9/5 Buddha's Birthday	1
<del>                                     </del>	15	16	17	18	19	20	21		1
<del>                                     </del>	_		_					25/5 School Self-Evaluation Day.	+
<del>                                     </del>	22	23	24	25	26	27	28	20/0 00/100/1 00/11-Evaluation Day.	+
	29	30	31					NO Tree No Feetback Of Control	+
				1	2	3	4	3/6 Tuen Ng Festival. 2/6 Graduation	+
June	5	6	7	8	9	10	11		-
	12	13	14	15	16	17	18		
	19	20	21	22	23	24	25		
	26	27	28	29	30			30/6 Achievement Celebration	
						1	2	01/07 HKSAR Establishment Day	
July	3	4	5	6	7	8	9	4/7-14/8 Summer Holiday	
	10	11	12	13	14	15	16	,	1
<del>                                     </del>	17	18	19	20	21	22	23		+
<del>                                     </del>	_								+
<del></del>	24	<u>25</u>	<u>26</u>	<u>27</u>	28	<u>29</u>	<u>30</u>		+
	<u>31</u>								4
August	_	1	2	3	4	<u>5</u>	6		
	7	8	9	<u>10</u>	11	<u>12</u>	<u>13</u>	12/08 New Staff Meeting	
	14	15	16	17	18	19	20	16-17/08 Staff Meeting	
	21	22	23	24	25	26	27		
	28	30	31						1
	-20	- 50							
	Cab-	ol Holi	idarr		Public	L Latin	lav		1
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			onmo	nt Day					

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